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Mapping Human Resource Management: Reviewing the field and charting future directions



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ABSTRACT

Using recent advances in science mapping, this article systematically reviews the Human Resource Management (HRM) field. We analyze 12,157 HRM research articles published over 23 years to reveal the topic content and intellectual structure of HRM scholarship. A downloadable, searchable HRM topic map is provided (http://bit.ly/HR-Map) that reveals: a) 1702 HRM article topics, b) the number of articles on each topic, c) topic relations, trends, and impact, and d) five major HRM topic clusters. We discuss the overall intellectual structure of HRM scholarship and review the five topic clusters. Next, the topic content of HRM scholarship is compared to that of 6114 articles from the practitioner-oriented outlet *HR Magazine*. We identify 100 topics emphasized to a much greater degree in the practitioner-oriented literature. Seven key themes for future research that could help align HRM scholarship with the interests of HR practitioners are identified and discussed.

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1. Introduction

In the Human Resource Management (HRM) field, review articles typically consider only some of the "trees", but lack the scope to provide a synthetic overview of the "forest" of HRM scholarship. In particular, HRM review articles typically focus on examining the contents of a small number of articles on a specific topic or research question. As such, scholars are likely to have a fragmented and incomplete view of the field overall, which may result in research silos, redundant research efforts, and lost opportunities for meaningful conversations *between* topic areas. Moreover, narrow, disconnected, and incomplete views of the HRM field can limit scholars' ability to detect research opportunities.

In recent years, new alternatives to the traditional narrow review have emerged. In particular, what can be called *structural reviews* 1) examine the relations *between* topic areas, and 2) use some form of quantification to succinctly summarize a large literature (Porter, Kongthon, & Lu, 2002). As Porter et al. (2002), a broad scan of a literature "can extend the span of science by better linking efforts across research domains. Topical relationships, research trends, and complementary capabilities can be discovered, thereby facilitating research projects" (p. 351). In addition, because structural reviews employ some form of quantification and objective analysis, such reviews "improve the review process by synthesizing research in a systematic, transparent, and reproducible manner" (Tranfield, Denyer, & Smart, 2003, p. 207). In doing so, structural reviews help overcome a key limitation of traditional review articles: their lack of rigor (i.e. biased, subjective, impressionistic description).

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In this article, we employ science mapping from the discipline of bibliometrics to provide the most comprehensive and systematic review of the HRM field to date. In particular, while a traditional review might analyze 50–200 articles, this review is based on a rigorous analysis of 12,157 systematically identified HRM research articles published over >23 years. The science map analysis on which this review is based is presented to readers in the form of the downloadable HRM Map, which allows readers to explore: a) 1702 topics in HRM scholarship, b) the number of articles on each topic, c) topic relations, trends, and impact, and d) five systematically identified, major HRM topic clusters. After presenting this analysis, we describe how scholars can use the downloadable HRM Map and systematic reviews provided to identify promising future research opportunities from across the HRM literature using the process of abductive reasoning.

In the latter portion of this article, we turn our attention to identifying research opportunities that can help bridge the "research-practice gap" in HRM. In particular, a number of HRM scholars have raised concerns that there may be discrepancies between the topics studied in HRM scholarship and the topics of interest to HR practitioners (e.g. Deadrick & Gibson, 2007, 2009; Rynes, Giluk, & Brown, 2007). However, prior attempts to identify if/where these gaps exist have drawn on limited samples of HRM scholarship, and employ methods that only identify discrepancies at the level of broad topic categories (e.g. Strategic HRM) (e.g. Deadrick & Gibson, 2007, 2009). As such, it is difficult to know a) whether the discrepancies identified previously are artifacts of the limited sample of HRM scholarship analyzed, and b) which *specific* topics warrant greater scholarly attention. The second major section of this paper aims to address these issues by providing a comparative topic analysis of 1) the 12,157 HRM research articles versus 2) 6114 articles from a key practitioner-oriented outlet: the Society for Human Resource Management's *HR Magazine*. We systematically identify 100 specific topics with the greatest discrepancy in emphasis between HR practitioner-oriented writing versus academic HRM. We then review seven topic themes for future research that could help align HRM scholarship with the interests of practitioners.

This article endeavors to make four substantial contributions to HRM scholarship. *First*, we aim to provide the most rigorous description of the intellectual structure of HRM field to date – offering readers a bibliometrically grounded taxonomy of HRM literatures, a searchable topic map of the field, reviews of five systematically identified major topic literatures in HRM, and views of changes in the field over time. *Second*, we describe how opportunities for future scholarship can be detected by applying abductive reasoning to the downloadable HRM Map and topic cluster reviews. *Third*, the identification of 100 specific topics emphasized to a much greater degree in practitioner-oriented (as compared to academic) HRM provides actionable insights as to which topics HRM scholars could attend to to help address the "research-practice gap". *Fourth*, we conclude with a number of provocations meant to evoke "big picture" reflection by HRM scholars on the status and trajectories of their literatures, and to flag what we see as key challenges and opportunities for these literatures going forward.

2. Prior reviews of the HRM field and the added value of science mapping

Existing reviews on the HRM field can be categorized as either: 1) narrative reviews, or 2) structural reviews. Traditional narrative reviews tend to be impressionistic, offer a paper-by-paper analysis, and consider a fairly narrow topic area (e.g. green HRM - Renwick, Redman, & Maguire, 2013; e-HRM - Stone & Dulebohn, 2013). As can be seen from Table 1, the majority of narrative reviews in the HRM literature – i.e. 94 out of 115 articles – offer in-depth consideration of a particular HRM topic area. While valuable, these narrow reviews profile the "trees", but not the "forest".

At a macro level, 19 *narrative field-level* reviews have attempted to provide a broad description of the HRM field (see Table 2) from methodological (e.g. Guest, 2001; Williams & O'Boyle, 2008), historical (e.g. Kaufman, 2014), and theoretical (e.g. Ferris, Hochwarter, Buckley, Harrell-Cook, & Frink, 1999) standpoints. However, as such narrative reviews are impressionistic (rather than systematic) in their analysis, the validity of their descriptions and conclusions are questionable (Tranfield et al., 2003). Indeed, many of the questions considered in narrative field-level reviews of HRM (e.g. What are the field's major topic areas? What are the topics that have received the most research attention? How well integrated are various literatures within the field?) are ultimately empirical questions that can be answered through quantitative analysis of scholarship.

In contrast with narrative reviews, what we label as "structural reviews" take a different approach. Structural reviews have a macro focus and use some form of quantification to consider patterns across multiple topic literatures (Porter et al., 2002). Five structural reviews have attempted to profile the HRM field overall in various ways, and identify its subfields (Deadrick & Gibson, 2007, 2009; Fernandez-Alles & Ramos-Rodriguez, 2009; García-Lillo, Úbeda-García, & Marco-Lajara, 2016; Hoobler & Johnson, 2004). These articles are a substantial improvement over assertions about the major categories of HRM scholarship that are not grounded in any quantitative analysis of scholarship (e.g. Martín-Alcázar, Romero-Fernández, & Sánchez-Gardey, 2008). While these prior works make important contributions, they also all have major limitations.

First, prior structural reviews of the HRM field have tended to rely on intuition to determine the major categories of HRM scholarship, *and* rely on subjective assessments to assign topics and articles to these categories. While authors' intuitively derived categories of HRM scholarship can be informative, they can also inadvertently introduce author bias and mischaracterizations into the picture of the field they present (Tranfield et al., 2003). For example, new topic areas or those that authors are unfamiliar with can be overlooked. Indeed, given the size of the HRM literature, intuitively derived topic categories are unlikely to fully and accurately represent the field's topic content and structure. In contrast, new bibliometric approaches can be used to systematically identify 1) scholarly topics, 2) higher-level topic domains, and 3) which topics empirically "belong" to which topic domains.

Second, the few articles that attempt to empirically identify major HRM topic areas rely on article samples from one or two journals that represent only a fraction of the HRM literature (Deadrick & Gibson, 2007, 2009; Fernandez-Alles & Ramos-Rodriguez, 2009; García-Lillo et al., 2016; Hoobler & Johnson, 2004). Drawing on non-representative samples can misrepresent

Traditional reviews of HRM subfields.

Review	Key topics discussed and reviewed	Theoretical ^a	Methodological ^b	Historica
Shen, Chanda, D'Netto, and Monga (2009)	Diversity management	Х		
Marler and Fisher (2013)	Electronic HRM (e-HRM); SHRM	Х	Х	
Stone and Dulebohn (2013)	Emerging directions: e-HRM	Х		
Strohmeier (2007)	Emerging directions: e-HRM	X	Х	
Greenwood (2012)	Emerging directions: ethical HRM	X		
Renwick, Redman, and Maguire (2013)	Emerging directions: green HRM	x		
Cooke, Shen, and McBride (2005)	Emerging directions: outsourcing HR	x		
Bardoel, De Cieri, and Santos (2008)	Employee wellbeing: work-life balance	x	Х	
Dulebohn, Molloy, Pichler, and Murray (2009)	Compensation	x	A	
Gupta and Shaw (2014)	Compensation	x		
Kavier (2014)	Compensation	X		
Wang and Shultz (2010)	Employee retirement	X		
Cullinane and Dundon (2006)	Employment contracts	X		
evashina, Hartwell, Morgeson, and Campion (2014)	Employment interviews	X	Х	
Aacan (2009)	Employment interviews	Λ	X	
		Х	Λ	
Garengo, Biazzo, and Bititci (2005)	Performance management			
iturman (2007)	Performance management	Х		
reaugh (2008)	Recruitment & selection	Х		
reaugh (2013)	Recruitment & selection	Х		
reaugh and Starke (2000)	Recruitment & selection	Х	V	V
lough and Oswald (2000)	Recruitment & selection	Х	Х	Х
loyhart (2006)	Recruitment & selection	Х		
yan and Ployhart (2014)	Recruitment & selection	Х	Х	Х
ackett and Lievens (2008)	Recruitment & selection	Х	Х	
hen and Klimoski (2007)	Training	Х		
alas and Cannon-Bowers (2001)	Training	Х		
Tharenou, Saks, and Moore (2007)	Training	Х	Х	
Holtom, Mitchell, Lee, and Eberly (2008)	Turnover & retention	Х	Х	Х
Hom, Mitchell, Lee, and Griffeth (2012)	Turnover & retention	Х		
iteel and Lounsbury (2009)	Turnover & retention	Х		
Zanko and Dawson (2012)	Work, health & safety	Х	Х	
Godard and Delaney (2000)	HRM & industrial relations	Х		
Truss, Shantz, Soane, Alfes, and Delbridge (2013)	HRM-performance & employee engagement	Х		
Van De Voorde, Paauwe, and Van Veldhoven (2012)	HRM-performance & employee wellbeing	Х	Х	
Boselie, Dietz, and Boon (2005)	HRM-performance link	Х	Х	
Oyer and Reeves (1995)	HRM-performance link	Х		
Fleetwood and Hesketh (2006)	HRM-performance link	Х	Х	
Gerhart, Wright, Mc Mahan, and Snell (2000)	HRM-performance link		X	
Guest (1997)	HRM-performance link	х	X	
Guest (2011)	HRM-performance link	X	X	
anssens and Steyaert (2009)	HRM-performance link	7	X	
Kim, Wright, and Su (2010)	HRM-performance link	Х	A	
Paauwe and Boselie (2005)	HRM-performance link	X	х	
Paauwe (2009)	HRM-performance link	X	X	
	1		Λ	
Alewell and Hansen (2012)	HRM-performance link: HRM process approach	Х		
liang et al. (2012)	HRM-performance link: HRM process approach	Х		
Sanders, Shipton, and Gomes (2014)	HRM-performance link: HRM process approach	Х		
Afiouni, Ruel, and Schuler (2014)	IHRM (international human resource management)	Х		
Aycan (2005)	IHRM	Х		
Bartram and Dowling (2013)	IHRM	Х		
Brewster and Suutari (2005)	IHRM	Х		
Budhwar and Debrah (2009)	IHRM	Х		
Claus and Briscoe (2009)	IHRM	Х	Х	
Cooke (2009)	IHRM	Х		
De Cieri, Cox, and Fenwick (2007)	IHRM	Х		
Delbridge, Hauptmeier, and Sengupta (2011)	IHRM	Х	Х	
Doherty (2013)	IHRM	Х		
Kamoche et al. (2012)	IHRM	Х		
Kang and Shen (2014)	IHRM	Х	Х	
McDonnell, Stanton and Burgess (2011)	IHRM	Х		
Napier and Vu (1998)	IHRM	X	Х	
Poon and Rowley (2010)	IHRM	X		
Schuler and Tarique (2007)	IHRM	X		
Schuler, Budhwar, and Florkowski (2002)	IHRM	X		
Fakeuchi (2010)	IHRM	X		
Wei and Rowley (2009)	IHRM	X		
Budhwar and Debrah (2001)		X		
	IHRM: comparative HRM	Λ		

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Table 1	(continued)
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Review	Key topics discussed and reviewed	Theoretical ^a	Methodological ^b	Historical
Clark, Grant, and Heijltjes (1999)	IHRM: comparative HRM	Х		
Steinmetz, Schwens, Wehner, and Kabst (2011)	IHRM: comparative HRM	Х	Х	
Arthur and Boyles (2007)	SHRM (strategic human resource management)	Х	Х	
Bahuguna, Kumari, and Srivastava (2009)	SHRM	Х		
Batt and Banerjee (2012)	SHRM	Х		Х
Boxall and Purcell (2000)	SHRM	Х		
Delery and Doty (1996)	SHRM	Х		
Jackson, Schuler, and Jiang (2014)	SHRM	Х		
Jiang, Takeuchi, and Lepak (2013)	SHRM	Х	Х	
Kaufman (2010)	SHRM	Х		
Kaufman (2012)	SHRM	Х		Х
Lengnick-Hall and Lengnick-Hall (1988)	SHRM	Х		
Lengnick-Hall, Lengnick-Hall, Andrade, and Drake (2009)	SHRM	Х		
Lepak and Shaw (2008)	SHRM	Х		
Lepak, Liao, Chung, and Harden (2006)	SHRM	Х		
Way and Johnson (2005)	SHRM	Х		
Wright and McMahan (1992)	SHRM	Х		
Wright and Snell (1991)	SHRM	Х		
Fulmer and Ployhart (2014)	Strategic human capital	Х	Х	
Nyberg, Moliterno, Hale, and Lepak (2014)	Strategic human capital	Х		
Wright, Coff, and Moliterno (2014)	Strategic human capital	Х		
Dries (2013)	Talent management	Х	Х	
Gelens, Dries, Hofmans, and Pepermans (2013)	Talent management	Х		
Lewis and Heckman (2006)	Talent management	Х		
Nijs, Gallardo-Gallardo, Dries, and Sels (2014)	Talent management	Х	Х	
Tarique and Schuler (2010)	Talent management	Х	Х	
Thunnissen, Boselie, and Fruytier (2013)	Talent management	Х		

^a Reviews of theoretical concepts and frameworks.

^b Reviews of method-related issues.

 $^{\rm c}\,$ Review of the historical evolution of research over a particular time period.

the actual topic content and structure of HRM scholarship. For example, in drawing on article counts from only two journals (*Journal of Applied Psychology*, *Personnel Psychology*), Deadrick and Gibson's (2007, 2009) research designates *Teams/Work groups* as a major category of HRM scholarship alongside categories such as *Strategic HRM* and *International HRM*. Indeed, drawing on this narrow sample leads the authors to find that *Teams/Work groups* is a larger HRM research literature than *International HRM*. The authors acknowledge that drawing on two journals is a limitation, further noting that "Admittedly these two journals are outlets

Table 2

Narrative reviews of the HRM literature: Field level.

Review	Key topics discussed and reviewed	Theoretical	Methodological	Historical
Becker and Menges (2013)	Reviews the use of biological measures.		Х	
Budhwar (1996)	Reviews some key HRM models.	Х		
Davidson, McPhail, and Barry (2011)	Reviews historical evolution of whole field; zooms into theory on Hospitality HRM also.			Х
DeNisi, Wilson, and Biteman (2014)	Reviews divergence of research and practice worlds.			Х
Ferris et al. (1999)	Reviews theoretical foundations of the field.	Х		
Ferris et al. (2007)	Reviews evolution of HRM field.	Х		Х
Fisher (1989)	Reviews research regarding issues relating to both HR executives and HR managers.	Х		
Godard (2014)	Reviews how the employment relations has become more psychologically oriented.		Х	х
Guest (2001)	Offers recommendations on how empirical research can be improved in HRM literature.	Х	Х	
Kamoche (1991) Kaufman (2014)	Reviews the relationship between HRM and various philosophies of science. Reviews historical evolution of field.	Х		х
Mahoney and Deckop (1986)	Reviewed developments of personnel administration and HRM.	х		
McKenna, Singh, and Richardson (2008)	Reviews HRM's ontologies; encourages more interpretivist research and critical analysis of HRM.	X		
Roehling et al. (2005)	Identifies some of the existing limitations of current literature and outlines key future needs.	Х		
Ruona and Gibson (2004)	Reviews evolution of HRM field.	Х		
Schuler and Jackson (2014)	Reviews field's historical evolution from a multiple stakeholder perspective.	Х		х
Ulrich (1998)	Reviews importance of HRM field.	Х		
Watson (2010)	Philosophically and critically reviews HRM.		Х	
Williams and O'Boyle (2008)	Reviews measurement models used in HRM.		Х	

that focus on the interests of Industrial/Organizational (I/O) Psychologists" (Deadrick & Gibson, 2007, p. 137). Similarly, García-Lillo et al. (2016, p. 1486) also note the "selection of a single journal: IJHRM" as a limitation of their study. Without an actual field-level assessment that systematically identifies HRM scholarship from across journals, it is difficult to know how representative any one HRM journal is and/or if particular journals skew toward particular kinds of HRM scholarship. Indeed, our use of bibliometrics to identify a more comprehensive body of HRM scholarship suggests the need for caveats around the claims made in the above mentioned studies, as their source journals appear to skew toward certain kinds of HRM scholarship in ways that are likely to overlook at least one (and as many as three) major HRM literatures. Thus, the representativeness of these prior depictions of the HRM field is questionable.

In contrast, the field of bibliometrics has developed methods for rigorously identifying and analyzing large academic literatures to produce dramatically more complete pictures of scholarly fields. These approaches are becoming increasingly popular in Management and across the sciences (Zupic & Čater, 2014), but have yet to be used to analyze an inclusive sample of HRM scholarship.

3. HRM Map methodology

To provide a systematic review of the HRM literature, we employ the VOSviewer science mapping framework (van Eck & Waltman, 2010, 2014). VOSviewer facilitates three considerable improvements over prior attempts to review the HRM field, namely 1) a significant increase in the amount of scholarship that can be analyzed, providing a more representative basis for reviewing the field, 2) a rigorous set of bibliometric methods designed to systematically identify the intellectual content and structure of the field, and 3) an improved level of detail in the representation of the field's topic content. By using VOSviewer science mapping, we are able to provide readers with a downloadable and dynamically explorable topic map of the HRM field that can be used to examine the intellectual content and structure of HRM in rich detail. These advantages are likely reasons why VOSviewer has become a popular tool for analyzing and reviewing scholarship, and has been widely employed to profile numerous literatures across the sciences in the past few years (VOSviewer - Publications, 2015).

3.1. Sample

A four-stage process was used to identify HRM scholarship for analysis. First, we searched the Web of Science (WoS) for articles from 132 management journals¹ published between January 1992² and August 2015, which contained at least one of the following search terms in their title or abstract: HR, SHRM, HRM, human resource (including any suffix), and personnel manage (including any suffix). This initial search identified 7887 articles. Second, we identified any additional articles published in "niche HRM journals" (i.e. journals with a principle focus on HRM). Journals were considered to be niche journals if at least 40% of the articles they published since 1992 included one or more of the search terms mentioned above. Six journals met the criteria: *Asia Pacific Journal of Human Resources, Human Resource Management, Human Resource Management Journal, Human Resource Management Review, International Journal of Human Resource Management, and Personnel Review.* Third, we conducted a manual review of journals with a slightly lower inclusion percentage and identified two additional niche HRM journals: *International Journal of Manpower* and *International Journal of Selection and Assessment.* 1674 additional articles were collected. Fourth, we then collected and manually reviewed all articles not yet included in our corpus with at least one reference to any of the selected niche journal articles. This step identified 2596 relevant articles, leading to a total of 12,157 HRM articles identified from the WoS database.

3.2. Analysis

The HRM Map was created by using the VOSviewer framework of science mapping methods to analyze the primary topic content of article titles and abstracts. To prepare titles and abstracts for analysis, we merged abbreviations and their full terms (e.g. chief executive officer and ceo) into the most common form of the term in the article dataset (e.g. ceo), and very long terms into more abbreviated forms (e.g. "strategic human resource management" into "strategic HRM"). We further standardized terms by converting British spellings to U.S. English.

Once titles and abstracts were prepared for analysis, we used the VOSviewer term identification function to systematically identify the key topics of articles. The key article topics in academic writing are typically in the form of noun phrases (i.e. nouns plus any preceding nouns or adjectives) in article titles/abstracts (Justeson & Katz, 1995). Thus, VOSviewer uses natural language processing to identify noun phrases in the titles/abstracts of scholarly articles. Next, a term occurrence threshold is applied, such that a term needs to occur in the title/abstract of at least 10 different articles to be considered as a candidate term for mapping. The threshold of 10 occurrences helps ensure reliable placement of term relations in the map, and has been shown to help remove misspelled and non-meaningful noun-phrases (see van Eck, 2011). Thus, the 10 article occurrence threshold is the default in VOSviewer.

Once noun phrases were identified and standardized, terms were independently coded by two authors based on a classification scheme inspired by Lee, Felps, and Baruch (2014) and Whetten (1989). In particular, terms were coded into five categories:

¹ These are the management journals identified by Felps, van Eck, Waltman, and Meuer (2014) with reference to the 36th edition of Anne-Wil Harzing's Journal Quality List, extended with ten HRM related journals.

² The WoS does not systematically contain articles published before 1992 (Thomson Reuters, 2016).

"how-terms" (i.e. research design, statistical techniques; e.g. "cluster analysis"), "who-terms" (i.e. individual and collective actors; e.g. "expatriate", "top management team"), "what-terms" (i.e. concepts, variables, theories; e.g. "human capital"), and "where-terms" (i.e. industries, work contexts, geographic areas; e.g. "hospitality industry", "China"). Terms that did not fall into these categories were excluded (e.g. "Elsevier", "John Wiley & Sons", "summary", "significant finding"). Inter-rater reliability between the two raters' codes was high (Cohen's Kappa = 0.89). The HRM Map contains 1702 terms.

To prepare terms for mapping, VOSviewer measures the relatedness of terms using the *association strength* measure. In particular, the degree of relatedness between terms on the map is determined by the ratio of co-occurrence between two terms over the product of the occurrence counts of the two terms (Rip & Courtial, 1984; van Eck & Waltman, 2009). In other words, association strength is the observed co-occurrence between the two terms as compared to the degree to which each term co-occurs with other terms in the article sample.

Next, VOSviewer visualizes term relatedness in a downloadable, two-dimensional map. The placement of terms on the map is determined by the VOS mapping algorithm, which minimizes the difference between association strength and distance between term pairs such that, on average, terms that tend to co-occur in article title/abstracts are placed closer together (van Eck & Waltman, 2011). We used 250 random starts in order to help increase the likelihood of a robust mapping solution.

Finally, the VOS clustering algorithm is applied, which uses an optimization algorithm to systematically identify categorical clusters of terms (i.e. topic areas) based on their patterns of relatedness. The clustering algorithm maximizes the sum of the association strengths of pairs of objects belonging to the same cluster while minimizing the size of the clusters (Waltman & van Eck, 2013). To identify clusters, we used the default VOSviewer clustering resolution parameter of 1 and set a minimum cluster size of 50 terms (i.e. enough terms to review and be viewable in a static map image). Like the mapping algorithm, 250 random starts were used to arrive at the final clustering solution. The VOSviewer clustering algorithm identified five term clusters.

3.3. Limitations

The set of HRM articles identified for this sample may differ from those one might identify using other sampling strategies. For example, an alternative sampling strategy would have been to manually review all articles in all management journals and identify the ones that met a particular definition of Human Resource Management. Although this manual process would also have significant limitations (e.g. introducing considerable subjectivity into the article selection process, time intensiveness), such a process could capture HRM articles that did not meet any of our article search parameters (i.e. not published in an HRM-niche journal, nor contains any of our search terms in its abstract/title, nor cites any HRM niche journal at least once). However, we believe that the systematic criteria we applied are reasonable for identifying HRM scholarship. Indeed, the sample of 12,157 HRM articles we identified through systematic application of the criteria above appears to be the most rigorous and comprehensive effort to identify HRM scholarship to date.

3.4. Results

3.4.1. Map downloading and navigation, fundamentals of interpretation, and HRM Map views

The scientometric analysis described above is visualized in the form of the searchable HRM Map, which will download to your computer when you click the link: http://bit.ly/HR-Map.³ Once the HRM Map is downloaded and opened, viewers can use their mouse (or the buttons in the top right corner) to zoom in on particular areas in the map. Specific topics can be found by using the search bar located on the "*Items*" tab on the left hand side of the map viewing window. The *size* of a particular topic on the map indicates the number of articles on that topic, and the exact number of articles associated with each topic appears when the viewer hovers their mouse over a topic node in the downloaded map. The distance between topics indicates their degree of co-occurrence in articles in the sample, where topics that tend to co-occur are positioned closer to one another.

The HRM Map has four different map views which each provide different information. First, the "*Network visualization*" of the map indicates the five systematically identified clusters of related topics (i.e. topic areas) by the *color* of the topic nodes (see static screenshot in Fig. 1).

A second way of viewing the HRM Map can be seen by clicking the "*density visualization*" tab above the map image (see static screenshot of the density visualization in Fig. 2). In the density visualization, colors ranging from green to red in intensity indicate the number of articles associated with the topics within a given space on the map. In particular, red indicates areas of comparatively high research intensity, while green indicates topic areas with comparatively less research intensity.

A third way of viewing the map can be seen by clicking the "*Overlay Visualization*" tab above the map image (see Fig. 3). This view shows which topics are "trending" and "cooling off". Topics that have the most recent average article publication year appear as red in the HRM Map (e.g. "moderated mediation model" – average article publication year 2013.64, "Facebook" – avg. pub. year 2013, "work engagement" – avg. pub. year 2012.78), while topics that tended to have an older average article publication year (e.g. "competing values framework" – avg. pub. year 1997) appear in cooler colors (e.g. blue).

³ Download Instructions: Clicking the hyperlink will automatically begin the download of a JNLP file to your computer. To view the map, double-click the downloaded file (for Windows) or <u>right</u>-click the file and select "Open" (for Mac) on any computer that has the free Java software installed (which is present on most Mac and Windows operating systems). Once opened, the JNLP file connects to the map data over the user's internet connection. Note: For some Mac computers, you may have to click that you accept that the file is not from an approved developer. For more information, please see the VOSviewer manual: http://www.vosviewer.com/getting-started#VOSviewer manual.

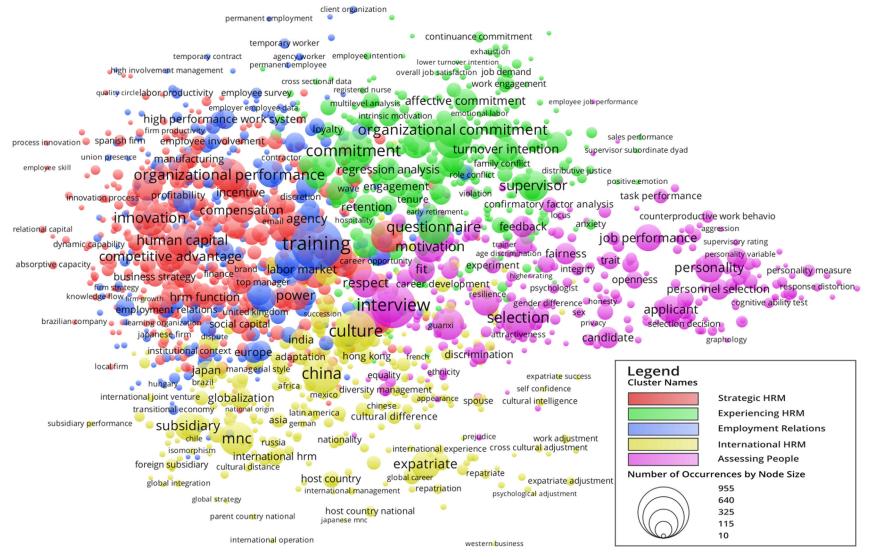
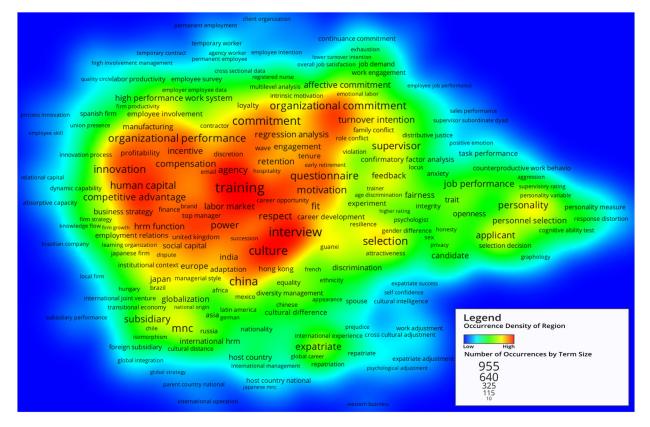
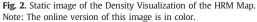


Fig. 1. Static image of the Network Visualization of the HRM Map (explorable map downloads from: http://bit.ly/HR-Map or here: http://renotate.cisglee.webfactional.com/static/sciencemaps/hrm/HRMMap.jnlp. A more "memory intensive"/slower to navigate version of the HRM Map that includes lines indicating which terms most frequently co-occur can be downloaded from this link: http://bit.ly/HR-Map-Lines or here: http:// renotate.cisglee.webfactional.com/static/sciencemaps/hrm/HRMMap-Lines.jnlp). Note: The online version of this image is in color.





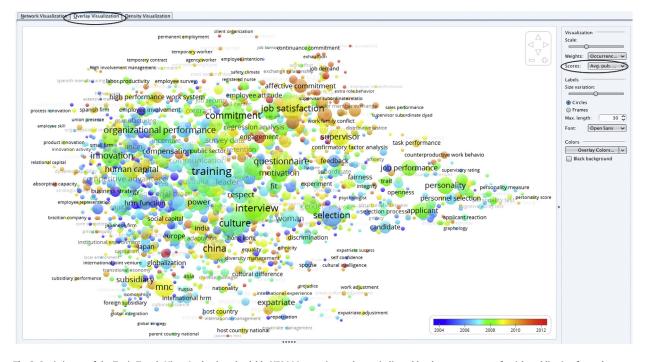


Fig. 3. Static image of the Topic Trends View. In the downloadable HRM Map, topic trends – as indicated by the average year of article publication for each term – can be viewed by a) clicking on the "Overlay Visualization" tab at the top of the screen, and then b) selecting "Avg. Pub. Year" in the dropdown menu next to "Scores:" in the visualization panel of VOSviewer version 1.6.5. Note: The online version of this image is in color.

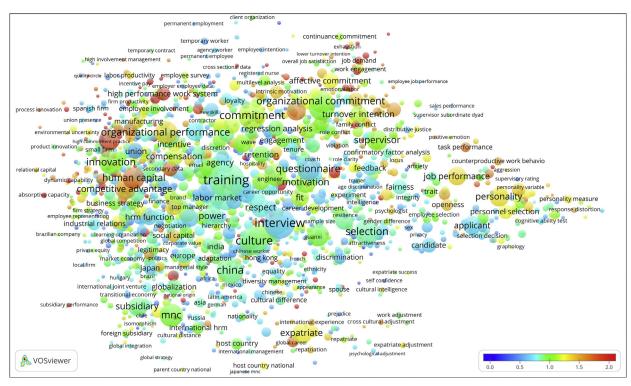


Fig. 4. Static image of the HRM Map's Term Impact View. In the downloadable HRM Map, term impact – i.e. the relative average citation impact of articles containing the term – can be viewed by a) clicking on the "Overlay Visualization" tab at the top of the screen, and then b) selecting "Ave. cit. impact" in the dropdown menu next to "Scores:" in the visualization panel of VOSviewer version 1.6.5.). Note: The online version of this image is in color.

A fourth view allows the viewer to explore the citation impact associated with each topic (see Fig. 4). In order to control for the amount of time that passed since the article was published (i.e. the amount of time scholars have had to read and cite the article), the citation count of each article is divided by the average citation count of all articles published in the same year. Afterwards, the citation impact of a topic is established by taking the average of the "normalized" citation scores of all articles the topic occurred in (van Eck, Waltman, van Raan, Klautz, & Peul, 2013). Thus, topics that occur in articles with high citation rates, relative to other articles published in the same year, have high scores and appear in red (e.g. "human capital resource" – average citation impact = 5.10). Topics with citation impact scores below 1 tend to occur in articles with citation rates below the average for their year of publication and appear in blue (e.g. "union representation" – avg. cit. impact = 0.47).

4. Review of the HRM field

In this section, we go into greater detail to provide 1) observations of the overall topic structure of the HRM field, and 2) a systematic review of each major topic area identified in the network visualization of the map (Fig. 1). In particular, our analysis of topic co-occurrence across 12,157 HRM articles over the past 23 years identifies five major HRM topic clusters: Strategic HRM (Cluster 1: Red), Experiencing HRM (Cluster 2: Green), Employment Relations (Cluster 3: Blue), International HRM (Cluster 4: Yellow), and Assessing People (Cluster 5: Magenta).⁴

4.1. Structural observations of the field

As can be seen in Figs. 1 and 2, the HRM Map reveals a number of interesting structural features of the field that could only have been guessed at by scholars to date. In particular, nearly 15 years ago, Wright and Boswell (2002) asserted that a "micro-macro" divide existed in HRM, and that HRM needed to "desegregate". The network visualization in Fig. 1 reveals topics associated with organizational-level issues on the left side of the map (e.g. Strategic HRM) and topics associated with individual-level issues

⁴ To name the five clusters, we drew on three sources. First, a focus group was conducted at an international conference of HRM scholars. Scholars were provided a list of the most frequently occurring "how", "who", "what", and "where" terms, and the top five most cited articles associated with each cluster. Subsequently, scholars individually nominated names for each cluster. Second, we reviewed all terms in each cluster, as well as 50 highly cited and 50 random articles associated with each cluster ter, and examined their self-described topic domain. Third, we examined the top ten journal sources that most frequently publish research belonging to each cluster – paying particular attention to journals uniquely associated with one cluster but not the others. This information was collated and discussed by the authors, who then generated naming options and chose names for each cluster from the options.

on the right side of the map (e.g. Assessing People). As such, Fig. 1 supports the notion that "macro" to "micro" is a useful *dimension* for describing one way in which HRM topics vary. However, a macro-micro *divide* would appear in the Fig. 2 density view as two red islands of high research intensity divided by a green or yellow low research intensity gulf – indicating disconnectedness between these topic areas. In contrast, Fig. 2 reveals a high degree of research intensity on a host of topics having to do with meso-level issues (e.g. "training", "organizational culture", "reward system", "organizational policy") that are actively linking macro and micro topic areas. Many of these meso-level issues are found in the Employment Relations and International HRM clusters. As such, our analysis suggests that the notion of a strong macro-micro *divide* does not accurately describe the HRM field's intellectual structure.

The HRM Map also reveals a significantly different topic taxonomy that than prior, more impressionistic descriptions of the HRM field. For example, Martín-Alcázar et al. (2008) attempted to describe the HRM field by proposing a Venn diagram showing three overlapping topic areas: Functional, International, and Strategic HRM. The HRM Map provides mixed support for this characterization. Our empirical analysis of topic relations reveals that International HRM and Strategic HRM are indeed major topic domains that partially overlap (as can be visually discerned from the proximity of the yellow and red clusters on the map, as well as the occasional interspersion of yellow topics within the predominately red topic space, and vice-versa). However, a Functional HRM cluster does not emerge as a distinct topic area. Rather, Functional HRM *topics* (e.g. compensation, selection, and training) evidence a more distributed pattern of co-occurrence, and are spread across three topic clusters not previously identified by Martín-Alcázar and colleagues – namely, the topic clusters: Assessing People, Experiencing HRM, and Employment Relations.

The HRM Map also offers mixed support for the topic categories proposed previously by Fernandez-Alles and Ramos-Rodriguez (2009), who assessed articles from a single HRM journal from 1985 to 2005. In particular, both the HRM Map and Fernandez-Alles and Ramos-Rodriguez (2009) identify five topic clusters, one of which is International HRM. However, there are also significant differences. First, Fernandez-Alles and Ramos-Rodríguez appear to overlook Employment Relations as a major HRM topic area, which our bibliometric analysis suggests is comparable in size and degree of topic coherence to International HRM. Second, our scientometric analysis of topic relations in HRM scholarship suggests that three of the topic categories they identify (i.e. HR and Firm Performance; Strategy, Structure, and Environment; and Strategic Management of HR) comprise an omnibus Strategic HRM category – also comparable in size and degree of topics that more typically "belong" to two different categories – i.e. Assessing People and Experiencing HRM – given their pattern of topic relations in HRM scholarship. The topic categories identified by Fernandez-Alles and Ramos-Rodríguez may be more reflective of the single journal source these authors were drawing from at the time, rather than the topic structure of the general HRM literature as it stands a decade later.

Given the more comprehensive article sample and rigorous methodologies employed to produce this analysis, we suggest that the HRM Map provides a more accurate and complete depiction of the intellectual content and structure of the HRM field. In particular, we suggest that the five topic areas identified in this analysis offer more a descriptively accurate taxonomy of HRM scholarship for organizing one's understanding of the field, and can aid in the interpretation and generation of new scholarly insights (e.g. McGarty, 1999; Weick, Sutcliffe, & Obstfeld, 2005) (as discussed in greater detail below). As these HRM topic categories have been either a) neglected in prior field-level reviews, or b) described based on authors' impressionistic assessments – rather than a systematic analysis – we now turn our attention to systematically describing the five major HRM topic areas.

4.2. Topic cluster reviews

As noted above, a key innovation of the HRM Map is that it not only identifies broad topic clusters, but also details the specific topic contents within each cluster. Thus, in the reviews below, we systematically describe the topic contents of each of the five HRM topic areas. To review each cluster, the topics within that cluster were organized into themes. Then, articles belonging to each cluster were examined to identify whether a stream of articles associated with each theme was present.⁵ To ensure no major themes were missed, we considered 50 highly cited articles and 50 random articles associated with each cluster. In presenting the reviews below, we aim to offer a foundational, empirically grounded review of the major topic areas of the HRM field.

By way of an overview of the HRM topic clusters, Table 3 presents the *how*, *who*, *what*, and *where* terms associated with the largest number of articles in each of the five HRM topic areas. Table 4 indicates a) the top trending topics for each cluster, defined as topics with the most recent average article publication date, and b) the topics that occur in articles with high relative citation rates. Table 5 indicates the *most frequently cited* articles that strongly "belong" to each cluster. Table 6 indicates the top 10 journals publishing research strongly associated with each cluster. Figs. 5 and 6 reveal the comparative growth of each of the five topic clusters in terms of a) number of articles produced, and b) percentage of the field's scholarship from 1992–2014 (the last complete year for which we have article data). We note that each major topic literature has grown markedly over the past two decades, at compounding growth rates of 9% (Strategic HRM), 12% (Experiencing HRM), 8% (Employment Relations), 11% (International HRM), and 9% (Assessing People).

4.2.1. Cluster #1: Strategic HRM (Red)

The Strategic HRM cluster focuses on understanding the relationship between HRM systems and firm performance. Key approaches developed to understand this relationship include: universalistic, contingency, configurational, and contextual (cf.

⁵ Articles were treated as belonging to a cluster when a) at least 50% of terms from a title/abstract belong to a single cluster, and b) the articles contained a minimum of two terms (i.e. to help ensure reliable cluster assignment).

Overview of the most frequent article topics per cluster in the HRM Map^a.

Cluster	Top how-terms	Top who-terms	Top what-terms	Top where-terms
Strategic HRM Cluster color: Red Terms: 495	Research design: longitudinal data, in-depth case study, cluster analysis, case study research, quantitative analysis, secondary data, archival data, laboratory, structured questionnaire, cross section, longitudinal case study, single case study, fictional case study. Statistical techniques: partial least squares path modeling,	Individual-level actors: HR manager, leader, HR professional, line manager, CEO, HR practitioner, team member. Collective actors: stakeholder, medium sized enterprise, HR department, manufacturing firm, board, small firm, Spanish firm, large firm.	Concepts: innovation, organizational performance, human capital, leadership, firm performance, communication, competitive advantage, competency, flexibility, power, strategic HRM, managerial practice, compensation, HRM function, organizational culture	Industry: manufacturing, engineering, accounting, high technology industry, pharmaceutical industry. Locale: developed country, New York.
Experiencing HRM Color: Green	structural equation analysis. Research design: questionnaire, survey data, longitudinal study, questionnaire survey, path analysis, questionnaire data.	Individual-level actors: supervisor, coworker, middle manager, teacher, individual employee, newcomer, service	Concepts: commitment, job satisfaction, organizational commitment, employee turnover, turnover	Industry : hotel industry, hospitality industry, service industry, tourism, construction
Terms: 331	Statistical techniques : regression analysis, structural equation modeling, regression, hierarchical regression analysis, factor analysis, multiple regression analysis, structural equation model, regression model, hierarchical linear modeling,	employee, female employee, older employee. Collective actors: workgroup, public organization, focus group, hotel, service organization, health care organization.	intention, conflict, retention, employee perception, reward, affective commitment, autonomy, psychological contract, stress, organizational support, engagement	industry, nursing. Locale: Turkey, Iran, Sri Lanka.
Employment relations Cluster color:	Research design: comparative analysis, wave, employee survey, panel data, workplace employment relations	Individual-level actors: older worker, temporary worker, temporary employee, skilled worker, agency worker.	Concepts: training, pay, government, agency, labor market, HRM policy, promotion, employment	Industry : public sector, private sector, service sector.
Blue Terms: 280	survey, interview data, representative survey, employer employee data, firm level data, Cranet survey, cluster.	Collective actors: union, bank, trade union, call center, public sector organization, council, local government, service company, client organization, works council.	relationship, high performance work system, contract, wage, industrial relations, voice, employee involvement, employment relations.	Locale: Australia, Europe, Germany, Spain, Canada, European country, Ireland, Britain, France, Netherlands, United Kingdom, Sweden.
International HRM	Research design: in-depth interview, exploratory study, survey result, qualitative	Individual-level actors: expatriate, expatriate manager, spouse, host country national,	Concepts: culture, globalization, performance management, international	Industry: industrial sector.
Color: Yellow Terms: 311	approach, primary data, quantitative study, cross cultural study, mail survey, qualitative case study, field survey, in-depth analysis, document analysis, detailed case study, qualitative methodology.	Chinese employee, mentor. Collective actors: MNC, subsidiary, MNE, foreign subsidiary, parent company, multinational firm, Japanese firm, MNC subsidiary, Chinese firm.	assignment, international HRM, mobility, staffing, expatriation, host country, career development, adaptation, talent management, internationalization, institutional theory, legitimacy.	Locale: China, USA, Taiwan, India, Japan, Hong Kong, Asia, New Zealand, South Korea, Singapore, Malaysia, North America, South Africa, Africa.
Assessing people Color: Magenta Terms: 285	Statistical techniques : hierarchical multiple regression analysis. Research design: field study, experiment, situational judgement test, structured interview, sample size, experimental design, experimental study, qualitative analysis, survey study, biodata.	Individual-level actors: woman, applicant, candidate, subordinate, job applicant, male, rater, female, recruiter, interviewer. Collective actors: large organization, person	Concepts: interview, selection, motivation, diversity, recruitment, personality, respect, gender, job performance, fit, performance appraisal, fairness, feedback, personnel selection, identity.	Locale: American, Switzerland.
	Statistical techniques: confirmatory factor analysis, content analysis, factor model, incremental validity, logistic regression analysis.	organization.		

^a "Top terms" were systematically selected by identifying the terms referenced in the largest number of article titles/abstracts per cluster, per term type category (e.g. who-term) and sub-category (e.g. Individual-level actors, Collective actors). A maximum of 15 of the most frequently referenced terms were identified.

Top trending terms^a & top impact terms^b by topic cluster.

Cluster	Top trending terms	Top article citation impact terms
Strategic HRM	Environmental sustainability, dynamic environment, resource dependence theory, electronic human resource management, partial least squares path modeling, innovative behavior, employees ability, supply chain management, absorptive capacity, human capital resource, innovation capability, social capital theory, Korean firm, nonprofit organization, corporate social responsibility	Corporate financial performance, human capital resource, extensive training, firm resource, firm level performance, financial capital, knowledge management practice, competitive strategy, firm financial performance, environmental management, Wright, knowledge exchange, higher productivity, human factor, firm specific human capital
Experiencing HRM	Moderated mediation model, hotel employee, age diversity, work engagement, psychological capital, employee engagement, positive psychological capital, job embeddedness, job demands resources model, multilevel modeling, generational difference, social exchange perspective, workplace relationship, multilevel analysis, social exchange relationship	Resources model, positive psychological capital, exhaustion, safety climate, high performance human resource practice, organizational level outcome, optimism, multilevel modeling, psychological capital, social exchange perspective, organizational behavior, job resource, group level, citizenship behavior, multivariate analysis
Employment relations	Global financial crisis, temporary agency worker, alternative dispute resolution, private equity, aging workforce, workplace partnership, liberal market economy, new public management, employee perspective, retirement age, Estonia, Cranet survey, private sector organization, Portugal, permanent worker	Macro level, quality circle, high performance work practice, high commitment management, exclusion, occupational group, high performance work system, innovative work practice, work intensification, high involvement management, job enrichment, work system, high involvement work practice, employment system, employee perspective
International HRM	Talent management practice, talent management, quantitative study, global talent management, international mobility, cultural intelligence, career attitude, employee performance management, Japanese MNC, Indian context, migrant, migrant worker, expatriate performance, expatriate academic, middle east	Career attitude, global talent management, relational perspective, talent management practice, career orientation, talent management, knowledge gap, quantitative study, career theory, international business study, subsidiary performance, motivational factor, global leader, managerial employee, firm growth
Assessing people	Facebook, online survey, person job fit, volunteer, counterproductive work, job interview, online questionnaire, core self-evaluation, corporate social performance, person environment fit, diversity practice, immigrant, counterproductive work behavior, applicant pool, empathy	Job level, counterproductive behavior, psychology, self-report measure, measurement error, anger, merit, performance criterium, emotional stability, social psychology, task performance, factor model, job offer, inclusiveness, counterproductive work behavior

^a Top trending terms are terms with the most recent average publication year of articles containing the term, and are presented in order of recency.

^b Top impact terms are terms with high average article citation counts relative to all other articles from the corpus published in the same year. Terms are presented in order, beginning with the highest impact term.

Delery & Doty, 1996). Several prominent scholars have examined the differences between these approaches (Martín-Alcázar, Romero-Fernández, & Sánchez-Gardey, 2005). For example, Boxall and Purcell (2000) reviewed the Strategic HRM debate between the "best practices" model, which focuses on the efficacy of independent practices (i.e. employs a universalistic perspective), and the "best fit" model, which takes internal and external factors into consideration (i.e. using a contingency, configurational, or contextual perspective). They concluded that few practices are effective independent of context.

Relatedly, map terms like "compensation policy/practice/system/strategy" reveal that the Strategic HRM cluster considers how compensation policies either support or contradict firm strategies. Drawing largely on archival data across many firms, articles associated with this cluster consider which compensation polices allow firms to pursue an innovative strategy (Yanadori & Marler, 2006), as well as how compensation practices fit with firms' other organizational practices such as empowerment (Chênevert & Tremblay, 2009), integrated manufacturing systems (Shaw, Gupta, & Delery, 2001), and Enterprise Resource Planning (da Silveira, Snider, & Balakrishnan, 2013).

Another major subtheme in the Strategic HRM cluster is how HR practices affect a firm's capacity to change in response to strategic imperatives. There are many terms associated with this underlying theme, including "change management", "innovation capability", "organizational learning capability", "external flexibility", "functional flexibility", and "learning agility" (DeRue, Ashford, & Myers, 2012). Specifically, HR practices nominated as having a causal connection to the ability to explore and adapt include external staffing, selection based on creativity and unique backgrounds, employing consultants, comprehensive training, job rotation, structural empowerment, long-term career development, "up or out" promotion systems, and group/firm based pay (Chang, Gong, Way, & Jia, 2013; Jaw & Liu, 2003; Martínez-Sánchez, Vela-Jiménez, Pérez-Pérez, & de Luis Carnicer, 2011; Swart & Kinnie, 2010). The Strategic HRM cluster also deals with the dark side of change – i.e. downsizing – as reflected in terms like "[organizational] downsizing", "workforce reduction", "outsourcing", and "corporate restructuring". In particular, a number of articles focus on how HR can ensure that downsizing is done in a way that is humane, retains strong employees, maintains the motivation of "survivors", and preserves product quality (Cameron, 1994; Cascio & Wynn, 2004; Lam & Reshef, 1999).

Finally, the Strategic HRM cluster explains firm performance as partly a function of its social and human capital, as illustrated by map terms such as "firm specific human capital", "intellectual capital", "organizational capital", "relational capital", and "social capital". Some of the most cited articles associated with this cluster use a perspective grounded in the resource-based view, human capital theory, and transaction cost economics (e.g. Huselid, Jackson, & Schuler, 1997; Lepak & Snell, 1999, 2002; Youndt, Subramaniam, & Snell, 2004). These articles conceptualize employees as a form of economic "capital", and consider HR practices as drivers of this capital. Key articles in this topic area typically suggest that firms should invest in HRM programs that increase and retain firm-specific human capital (Crook, Todd, Combs, Woehr, & Ketchen, 2011, p. 443), as well as the absorption and retention of knowledge (S. C. Kang, Morris, & Snell, 2007). These HR practices are expected to contribute to firm

Five most frequently cited articles per year belonging to each cluster^a.

Cluster 1: Top Articles Strategic HRM Cluster (Red)

- 1) Hansen, Nohria, and Tierney (1999). What's your strategy for managing knowledge?
- MacDuffie (1995). Human-resource bundles & manufacturing performance-organizational logic & flexible production systems in the world auto industry.
- 3) Delery and Doty (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions.
- 4) Delaney and Huselid (1996). The impact of human resource management practices on perceptions of organizational performance.
- 5) Hitt, Bierman, Shimizu, and Kochhar (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective.

Cluster 2: Top Articles Experiencing HRM Cluster (Green)

- 1) Demerouti, Bakker, Nachreiner, and Schaufeli (2001). The job demands-resources model of burnout.
- 2) Morrison and Robinson (1997). When employees feel betrayed: a model of how psychological contract violation develops.
- 3) Bakker, Demerouti, and Verbeke (2004). Using the job demands-resources model to predict burnout and performance.
- 4) Allen (2001). Family-supportive work environments: the role of organizational perceptions
- 5) Thompson, Beauvais, and Lyness (1999). When work-family benefits are not enough: the influence of work-family culture on benefit utilization, organizational attachment, and work-family conflict.

Cluster 3: Top Articles Employment Relations Cluster (Blue)

- 1) Osterman (1994). How common is workplace transformation and who adopts it.
- 2) Boxall and Macky (2009). Research and theory on high-performance work systems: Progressing the high-involvement stream.
- 3) Berntson, Sverke, and Marklund (2006). Predicting perceived employability: Human capital or labour market opportunities?
- 4) Armstrong-Stassen (2008). Organisational practices and the post-retirement employment experience of older workers
- 5) Tregaskis and Brewster (2006). Converging or diverging? A comparative analysis of trends in contingent employment practice in Europe over a decade.

Cluster 4: Top Articles International HRM Cluster (Yellow)

- 1) Rosenzweig and Nohria (1994). Influences on human-resource management-practices in multinational corporations.
- 2) Taylor, Beechler, and Napier (1996). Toward an integrative model of strategic international human resource management.
- 3) Jokinen, Brewster, and Suutari (2008). Career capital during international work experiences: contrasting self-initiated expatriate experiences and assigned expatriation.
- 4) Gaur, Delios, and Singh (2007). Institutional environments, staffing strategies, and subsidiary performance.
- 5) Johnson, Lenartowicz, and Apud (2006). Cross-cultural competence in international business: toward a definition and a model.

Cluster 5: Top Articles Employee Assessment Cluster (Pink)

- 1) Barrick, Mount, Judge (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next?
- 2) Salgado (1997). The five factor model of personality and job performance in the European community.
- 3) Zhao and Seibert (2006). The big five personality dimensions and entrepreneurial status: A meta-analytical review.
- 4) Ones, Dilchert, Viswesvaran, and Judge (2007). In support of personality assessment in organizational settings.
- 5) Salgado (2002). The big five personality dimensions and counterproductive behaviors.

^a The articles identified above met the criteria of 1) having the highest number of citations per year, 2) having a minimum of 50 citations in total, and 3) containing a minimum of two terms in their title/abstract, with at least 70% of terms belonging to a single cluster (i.e. to help ensure reliable cluster assignment).

performance, innovation, and competitive advantage through the theoretical mechanisms of inimitability and intangibility (Hatch & Dyer, 2004; Wright, Dunford, & Snell, 2001).

4.2.2. Cluster #2: Experiencing HRM (Green)

The second cluster, which we call "Experiencing HRM", primarily consists of topics associated with employees' perspectives, attitudes, and behaviors. The articles associated with this cluster deal with how HR elements influence employees' experiences at work. Specifically, the typical article in this cluster links aspects of HR (e.g. flextime) to a) employee experiences (e.g. perceived organizational support), and/or b) employee attitudes (e.g. job satisfaction). These experiences and work attitudes are sometimes linked to individual-level outcomes, including: organizational citizenship behavior, voluntary turnover, withdrawal behavior, and work effort. Illustrative examples are provided below.

Key types of employee experiences from this cluster include stress, (in)justice, psychological support, and work-life balance. First, a literature on HR and *stress* suggests that jobs designed to be more demanding than employees can cope with are experienced as stressful. This literature goes under the label "job demands resources model" (for a review, see Bakker, Demerouti, & Verbeke, 2004). Second, a literature on (*in)justice* suggests that HR practices and HR messages convey implicit promises to employees, and that employees are angered when these "psychological contracts" are violated (Sims, 1994). Third, a number of articles suggest that HR policies – e.g. formalized career mentoring, participation in decision making, fair rewards, and growth opportunities – can affect whether employees feel *psychological support* from their organizations and direct supervisors (D. G. Allen, Shore, & Griffeth, 2003). Fourth, HR elements like flextime, telecommuting, childcare support, and jobs that do not demand long hours can reduce work-family conflict and lead to *work-life balance* (T. D. Allen, 2001; Raghuram & Wiesenfeld, 2004; White, Hill, McGovern, Mills, & Smeaton, 2003).

Articles associated with this cluster also consider how HR practices affect important job attitudes, including job satisfaction, job involvement, employee engagement, morale, loyalty, and organizational commitment. For example, a number of studies indicate

Top 10 journal outlets per cluster^a.

Cluster 1: Strategic HRM	Article #	Cluster 3: Employment relations	#
1. International Journal of Human Resource Management	281	1. International Journal of Human Resource Management	185
2. Human Resource Management	256	2. International Journal of Manpower	80
3. Personnel Review	93	3. British Journal of Industrial Relations*	47
4. International Journal of Manpower	84	4. Human Resource Management Journal	38
5. Journal of Business Ethics*	63	5. Personnel Review	34
6. Human Resource Management Review	59	6. Industrial Relations*	29
7. Asia Pacific Journal of Human Resources	54	7. Asia Pacific Journal of Human Resources	27
8. Journal of Product Innovation Management*	52	8. Human Resource Management	24
9. Journal of Management Studies	49	9. Industrial & Labor Relations Review*	24
10. Human Resource Management Journal	48	10. Economic and Industrial Democracy*	23
Cluster 2: Experiencing HRM	#	Cluster 4: International HRM	#
1. International Journal of Human Resource Management	236	1. International Journal of Human Resource Management	326
2. Human Resource Management	71	2. Journal of World Business*	52
3. Personnel Review	56	3. Human Resource Management	48
4. Human Resource Management Review	46	4. Personnel Review	30
5. Human Resource Management Journal	42	5. Journal of International Business Studies*	27
6. Asia Pacific Journal of Human Resources	35	6. Asia Pacific Journal of Human Resources	26
7. International Journal of Manpower	32	7. European Journal of International Management*	23
8. Journal of Applied Psychology	31	8. Human Resource Management Review	19
9. Journal of Vocational Behavior*	30	9. International Journal of Manpower	18
10. Journal of Organizational Behavior*	25	10. Journal of Management Studies	15
C	Cluster 5: Employ	yee assessment	
1. International Journal of Selection And Assessment*	484	6. International Journal of Human Resource Management	47
2. Human Resource Management Review	72	7. Human Performance*	43
3. Journal of Applied Psychology	62	8. Journal of Business and Psychology*	36
4. Human Resource Management	61	9. Personnel Review	31
5. Personnel Psychology*	47	10. Journal Of Occupational and Organizational Psychology*	27

^a Articles assigned to clusters when over 50% of article title/abstract terms belonged to that cluster. Journals that are unique to the top 10 of a particular cluster are indicated with a *.

that high-involvement HR practices (e.g. nonmonetary recognition, competency development, fair rewards, information-sharing) are positively related to work attitudes, and ultimately employee behavior (Paré & Tremblay, 2007). A final theme linking HR policies to work attitudes is the HR process approach, which argues that employees' attitudes are influenced by how an HRM policy is implemented, explained, and made sense of (Li, Frenkel, & Sanders, 2011; Nishii, Lepak, & Schneider, 2008).

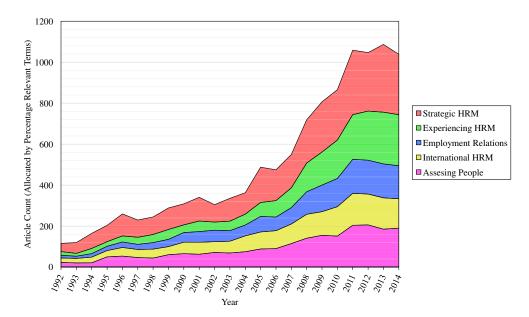


Fig. 5. HRM article count per cluster by year.

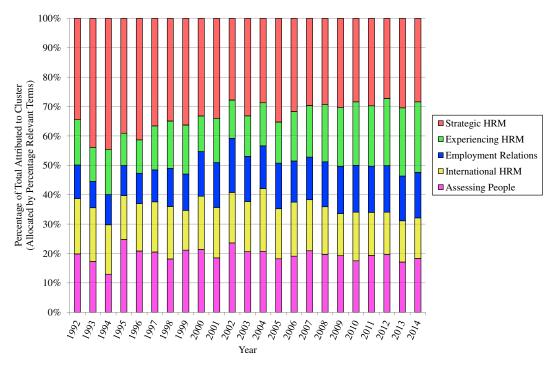


Fig. 6. Article count per cluster by year as percentages of the HRM literature.

4.2.3. Cluster #3: Employment Relations (Blue)

While the Employment Relations cluster often adopts the same economic assumptions as the Strategic HRM cluster, it is decidedly less allied with management. Instead, articles in this cluster often adopt a *pluralist* perspective, which presumes that conflict between workers and management is the inevitable result of contradictory interests (Godard & Delaney, 2000). The pluralist perspective is contrasted with the *unitarist* perspective. Unitarists argue that management and employees share common cause, and conflicts are the results of poor communication and outdated management philosophies (P. Thompson, 2011). Reflecting both sides of the debate, frequent topics in this cluster include: "government", "unionization", "employment relationship", "employee involvement", "employee voice", "employee participation", and "managerial control".

The articles associated with the Employment Relations cluster often look to government, unions, and labor markets to limit the extent of managerial control (P. Thompson, 2011). Pluralist scholarship suggests that fair worker treatment requires collective bargaining and collective voice mechanisms (Batt, Colvin, & Keefe, 2002). As such, pluralists lament the shift away from collective voice mechanisms (e.g. unions) in many countries and industries (Brewster, Croucher, Wood, & Brookes, 2007). Indeed, many articles associated with Employment Relations are often critical of creeping managerialism, and warn against HRM scholars becoming "servants of power" (Delbridge & Keenoy, 2010). In retort, these articles advocate a Critical HRM perspective.

As such, there is substantial critique of High Performance Work Systems (HPWS). This somewhat fuzzy concept has to do with synergistic bundles of HR practices that tend to lead to high performance (Boxall & Macky, 2009). The fuzziness of this concept derives from the reality that which particular bundles of HR practices lead to high performance (which is difficult to define in itself) is a function of our evolving understanding of causal relationships in the field and may vary across countries, governmental systems, cultures, economic climates, and firm strategies. As a result, there is no agreed upon list of high performance HR practices (Boxall & Macky, 2009). This leads some scholars to include as HPWS practices that mainly serve to intensify work (e.g. pay for performance, dismissal of low performers). Such work intensification policies may improve performance at the expense of worker welfare and job security (Godard, 2004). More broadly, Kaufman (2010, p. 308) suggests that the Strategic HRM literature disregards the potentially negative outcomes of HPWS for employees – i.e. "greater motivation' = work intensification?; 'more flexibility' = less job security?" – and argues that it is morally misguided to view labor primarily as a form of capital.

While the pluralist and unitarist perspectives differ in the value they place on collective voice mechanisms (e.g. unions) and work intensification, both sides agree that *individual* voice mechanisms can help ensure fair treatment (Dundon, Wilkinson, Marchington, & Ackers, 2004). Drawing on empirical findings showing that employee voice is associated with job satisfaction, organizational commitment, promotion of organizational diversity, and other positive outcomes, scholars recommend that all HRM professionals should foster employee voice opportunities (S. J. Wood & de Menezes, 2011; S. J. Wood & Wall, 2007).

In addition to high involvement practices, this literature also contains a number of studies attempting to assess whether employees and employers benefit from training. While some studies show that only employees benefit (in the form of increased wages) (e.g. Schone, 2001), most show that employers also benefit meaningfully (in the form of increased productivity and profits) (e.g. Colombo & Stanca, 2014; Lopes & Teixeira, 2013). Given that employees benefit from training, a number of studies

have demonstrated that organized labor (e.g. unions) "bargain for skills"; this, in turn, increases the prevalence and intensity of training (Heyes & Stuart, 1998). Of course, not all training programs are equally effective, and a number of studies associated with this cluster attempt to identify which training methods are most effective in particular situations (e.g. Martin, Kolomitro, & Lam, 2014). Related topics in the map include "training", "job training", "training opportunity/policy/system".

A final major subtheme in the Employment Relations cluster is "nonstandard employment", which is also called contingent work, atypical work, or peripheral work (Ashford, George, & Blatt, 2007). Topics related to this theme in this cluster include "[temporary] agency worker", "employment agency", "part time worker", and "temporary contract/employment/worker". Associated articles focus on the macro causes and micro consequences of nonstandard work. Proposed macro causes of nonstandard work include permissive government policy (Sahadev & Demirbag, 2011), economic recession (de Graaf-Zijl & Berkhout, 2007), a dynamic competitive environment and organizational strategies focusing on low-costs or adaptability (Purcell, Purcell, & Tailby, 2004), and the absence of family-friendly practices (Heywood, Siebert, & Wei, 2011). Micro-level consequences of nonstandard work for workers include less job security (Feldman, Doerpinghaus, & Turnley, 1994), lower wages (Underhill, 2010), less training, and greater social marginalization (Feldman et al., 1994; Hoque & Kirkpatrick, 2003), but perhaps also provide a gateway to permanent employment (Berton, Devicienti, & Pacelli, 2011). For firms, provisional evidence suggests that utilization of non-standard workers has a non-linear relationship with profits, being valuable up to a point and then becoming dysfunctional (Roca-Puig, Beltrán-Martín, & Segarra-Ciprés, 2015). Taken together, this evidence on non-standard employment is largely consistent with the pluralist view – i.e. that firm profits and worker welfare are in tension. However, some scholars are hopeful that morally responsible organizations can treat temporary workers in ways that are both ethical and financially rewarding (Bolton, Houlihan, & Laaser, 2012; Zhang, Bartram, McNeil, & Dowling, 2014).

4.2.4. Cluster #4: International HRM (Yellow)

Since 2003, there has been a rapid increase in research on topics relating to how HRM practices and their application may vary across countries (see Figs. 5 and 6). This suggests that, with the rise of globalization, there is an increasing interest in developing international HRM policies. Three major themes are considered below: expatriation, country specific HR, and firm-level international HRM.

In the International HRM literature, there is a substantial amount of work on how multinationals can choose an appropriate balance of third country nationals, host country nationals, and parent country nationals in their subsidiaries (Tarique, Schuler, & Gong, 2006; Tharenou & Harvey, 2006). In relation to parent country nationals, special attention is paid to expatriation and repatriation of employees. This is shown in the HRM Map by topics in this cluster such as "expatriate", "expatriate assignment", and "cross cultural adjustment". Some articles in this cluster consider the nature of international assignments, highlighting the difference between long-term, "conventional" expatriate assignments versus short-term overseas assigned (organizational) expatriation (Biemann & Andresen, 2010; Jokinen, Brewster, & Suutari, 2008; Peltokorpi & Froese, 2009). Some "comparative" articles contain findings showing that self-initiated expatriates adjust better to cultural and environmental differences in host countries than organizational expatriates (Doherty, Dickmann, & Mills, 2011). A related topic is how expatriates' cultural intelligence and cross-cultural adjustment are affected by various HRM practices, such as the impact of work-life balance policies, compensation, and rewards (Collings et al., 2007; Malek & Budhwar, 2013; Puck, Kittler, & Wright, 2008). Finally, repatriation is studied in relation to knowledge transfer (Lazarova & Tarique, 2005), as well as promotion and retention of the repatriated employees (Kraimer, Shaffer, & Bolino, 2009; Suutari & Brewster, 2003).

The HRM Map also indicates that certain locales are more frequently studied in the International HRM literature. Of these, China (a topic of 555 articles) is the most prevalent. Relatedly, many articles belonging to this cluster consider HR practices in particular countries. For instance, many international HRM researchers have studied the application of "Western" HRM practices in MNCs operating in China (for reviews, see Cooke, 2009; Kim, Wright, & Su, 2010). This may be due to the increased proliferation of international business operations occurring in China. A large number of articles are also associated with location topics such as "Japan", "Europe", and "Korea". Location topics associated with a comparatively small number of articles (e.g. Africa, Central and South America, India, Russia, and the Middle East) may suggest emerging opportunities to consider HRM differences in these regions (Afiouni, Ruel, & Schuler, 2014; Kamoche, Chizema, Mellahi, & Newenham-Kahindi, 2012). Given that HRM practices in these regions can vary dramatically from those in more frequently studied countries, research from these regions may reveal new local HR practices for HRM scholars to investigate, and provide opportunities to examine the effectiveness of established HRM approaches in new contexts.

Moving toward the top of the International HRM cluster, the topics begin to focus on more firm-level and societal-level factors. Many of the representative articles at this level of analysis that are associated with the International HRM cluster are grounded in institutional theory, as represented by topics such as "institutional environment" and "institutional theory". An institutional perspective on International HRM suggests that HRM practices are a function of norms, laws, and political structures that vary across countries (Bjorkman, Fey, & Park, 2007; Ferner, Almond, & Colling, 2005). A particular question of debate is the extent to which institutions are converging, such that there exists a set of "global" HR practices (Brewster, Wood, & Brookes, 2008; Gerhart & Fang, 2005). Relatedly, a great deal of attention has been paid to whether subsidiaries of multinationals should adopt HR policies consistent with local institutions, or whether headquarters' HR practices should be applied to local subsidiaries (Brewster & Suutari, 2005; Ferner et al., 2011; Gamble, 2003). Findings of these articles point out that many MNCs choose to tailor their HR practices to suit the locale they operate in (i.e. localization); however, in certain industries and locales, global standardization can also be appropriate, particularly when the so-called "country of origin effect" is dominant.

4.2.5. Cluster #5: Assessing People (Magenta)

The Assessing People cluster contains topics relating to how HR practices can assess and respond to the differences between people. Major subthemes in this cluster have to do with employee selection, assessing job performance, and individual differences.

A first subtheme in this topic cluster focuses on recruiting and assessing potential job applicants. Recruitment research includes studies on the kinds of people attracted to different kinds of organizations (Swider, Zimmerman, Charlier, & Pierotti, 2015), and internal and external recruitment methods (Breaugh, 2008). Articles on selecting employees focus on identifying optimal hiring procedures (Sackett & Lievens, 2008). Many of these articles have to do with the validity of personality and cognitive ability tests used to select applicants (Ones, Dilchert, Viswesvaran, & Judge, 2007; Ones & Viswesvaran, 1996; Salgado, 1997). Beyond these factors, this cluster contains articles considering: whether (structured) interviews are a valid selection technique despite impression management attempts by job applicants (Roulin, Bangerter, & Levashina, 2015), whether psychometric selection tests can be trusted despite applicants' attempts to "game the test" (e.g. Blickle, Momm, Schneider, Gansen, & Kramer, 2009; Ellingson, Sackett, & Connelly, 2007), and the extent to which hiring decisions both are and should be based on interviewers' subjective person-organization fit assessments (Cable & Judge, 1997). In addition, a number of articles related to "equal employment opportunities" consider whether hiring practices result in employment discrimination against women (Patterson & Walcutt, 2014), ethnic minorities (Hiemstra, Derous, Serlie, & Born, 2013), immigrants (Dietz, Joshi, Esses, Hamilton, & Gabarrot, 2015), and those with disabilities (Ren, Paetzold, & Colella, 2008).

A second subtheme within this cluster has to do with *assessing performance* – e.g. topics like "supervisor rating", "performance appraisal", and "job performance rating". Most articles on this theme focus on performance appraisal systems and feedback strategies (Levy & Williams, 2004). Some of these articles consider employees' reactions to being appraised and given feedback (Culbertson, Henning, & Payne, 2013). Others are about how performance appraisals can be designed by HR to minimize the potential for discrimination (Hennessey & Bernardin, 2003) and maximize demographic diversity. Still others are about alternatives to traditional appraisal techniques – e.g. feedforward interviews, which attempt to create a dialogue with employees about how they can create contexts where they will be more successful (Budworth, Latham, & Manroop, 2015; Kluger & Nir, 2010).

Related to assessing job performance, a third subtheme revolves around personality and cognitive ability. This theme links differences in personality and cognitive ability to assessments of core job performance (Barrick, Mount, & Judge, 2001; Schmitt, 2014), citizenship behaviors (Greenidge & Coyne, 2014), and counterproductive workplace behaviors (Salgado, 2002). Although much of this research describes personality in terms of the Big Five (i.e. openness, conscientiousness, extraversion, agreeableness, and emotional stability), recent studies have considered the predictive ability of both more nuanced (Goertz, Hülsheger, & Maier, 2014) and more aggregated personality dimensions (Van der Linden, te Nijenhuis, & Bakker, 2010).

5. Using the HRM Map and reviews to identify future research opportunities

This objective, systematic analysis of "where we are" as a field can provide a foundation for identifying promising research opportunities "where could we go next". In a field as big and topically varied as HRM, there are an enormous number of potential research opportunities. Which of these opportunities are actually pursued depends on the interests and capabilities of specific researchers, as well as their ability to detect these opportunities. The downloadable HRM Map can assist researchers by improving their ability to detect attractive research opportunities. The basic process we recommend to accomplish this is called *abduction*. Abduction is a mode of reasoning that involves noting contradictions between *observed evidence* and *one's theories/intuitions*, and then using the resulting surprise as motivation for conjecture and future inquiry (Fann, 2012). Abduction has been argued to be at the heart of creative research, and has been called the logic of discovery (Shepherd & Sutcliffe, 2011; Van Maanen, Sørensen, & Mitchell, 2007).

In this context, the downloadable map (supplemented by the above review) can be used as a basis for abduction. Scholars are encouraged consider how elements of the HRM Map contradict their theories/intuitions about HRM phenomena, and to use the resulting surprise as motivation for conjecture and additional inquiry. To be more specific, we highlight how the HRM Map could be the basis for two different kinds of abductive inquiry: 1) using surprises about the placement of terms relative to other terms to discover opportunities for *subfield integration*, and 2) using surprises about the size or absence of terms to uncover *interesting, underdeveloped research topics*. Each is considered in turn.

First, when one looks at the details of the downloadable, dynamic HRM Map, the relative placement of topics can yield interesting surprises – particularly when topics that seem logically or phenomenologically related are far apart on the map. This implies that there is relatively little research linking these topics, and their co-examination may yield valuable new research opportunities and insights. Indeed, some of the most impactful scholarly contributions come from "borrowing or mixing ... concepts or insights from two or more subfields within a discipline" (Leahey & Moody, 2014, p. 230). By considering the different major topic clusters reviewed above and presented in the HRM Map it is possible to identify potentially related topics that have little to no integration in HRM scholarship thus far. For example, building on our own backgrounds, we were surprised to note the considerable distance in the HRM Map between topics having to do with employee personality (in the Assessing People cluster) and employee compensation (in the Strategic HRM cluster). This distance is surprising given that it seems intuitively plausible that personality is likely to be strongly related to *which* compensation schemes are preferred, and *how* specific compensation schemes impact employee motivation. And indeed, a scan of the HRM literature suggests that only a small amount of scholarship has considered these fundamental and practically relevant questions (Cable & Judge, 1997; Mitchell & Mickel, 1999). Given the diverse backgrounds HRM scholars can bring when viewing the HRM Map, and the many thousands of potential combinations of topics that could be explored, we expect that there are likely to be numerous opportunities for valuable, boundary-spanning research discoverable through abduction with the HRM Map and reviews presented above.

Second, examining the number of articles associated with each topic in the HRM Map can also yield surprises. In particular, HRM topics that may be greatly emphasized in teaching students or in talking with practitioners are often surprisingly small or altogether absent from the map. As such, one way for future research to make truly novel contributions may be to research activities HR professionals are regularly involved in, but are not on the map – e.g. social media policies, terminating employees, office space design and allocation, workforce analytics, workplace substance abuse, employees who have been domestically abused, employee assistance programs (EAPs), office romance, or Human Resource Information Systems. While there are a few studies on each of these topics (e.g. Gammie, 1997; Milne & Blum, 1998; Pierce & Aguinis, 2013; Strohmeier, 2007; M. S. Wood & Karau, 2009), none of these areas have received substantial attention. As noted below, these topics are of considerable interest to practitioners, and raise a number of interesting theoretical questions. As such, they are likely to be areas where future research could make major discoveries with applied relevance.

6. Comparative topic analysis of HRM scholarship vs. an HR practitioner-oriented outlet

A rigorous, systematic analysis of the content of HRM scholarship can offer a rich foundation for comparing "what is" to "what could be". In particular, for some time, scholars have been raising concerns about discrepancies between the topics considered in HRM scholarship and the topic interests of HR practitioners (e.g. Deadrick & Gibson, 2007, 2009; Rynes et al., 2007). However, attempts to identify the topic gaps between HRM scholarship and the interests of practitioners to date have had two significant limitations.

First, prior attempts to compare HRM scholarship to practitioner interests have been substantially limited by the article samples used to represent the HRM field. For example, Deadrick and Gibson (2007) conducted important work in this area comparing a sample of 1665 "academic" articles from two journals to 2691 "practitioner" articles from 1986–2005. While the number of articles in their sample is high relative to other analyses of HRM, it is only a fraction of the HRM literature overall, and thus not necessarily representative of the field's full topic content. Thus, it is unclear whether the discrepancies they identify are an artifact of the two particular academic journals they chose to draw articles from (i.e. *Journal of Applied Psychology* and *Personnel Psychology*). For example, Deadrick and Gibson note a significant gap between practitioner interest in Strategic HRM and the amount of Strategic HRM research. And yet, as can be seen in Table 6, *JAP* and *Personnel Psychology* are not major outlets for Strategic HRM research. Rather, *International Journal of Human Resource Management* and *Human Resource Management* are the key outlets for Strategic HRM scholarship.

Second, the methodology for comparing academic and practitioner-oriented HRM to date has been considerably limited. For example, similar to many HRM reviews before them, Deadrick and Gibson (2007) categorize the articles in their sample into 49 author-generated subcategories, nested in 15 larger categories – the latter of which were the basis for reporting discrepancies. Identifying discrepancies between research and practice at the level of 15 overarching categories (e.g. Strategic HRM, International HRM) offers comparatively little direction for scholars working at the topic-level as to which specific topics warrant greater attention.

In contrast, by using bibliometric methods, we are able to provide a substantially improved research-practice topic discrepancy analysis. In particular, below, we a) analyze larger and more up-to-date samples of both HRM scholarship (i.e. 12,157 HRM articles) and practitioner-oriented articles (i.e. 6114 articles), b) use bibliometric term identification to systematically identify the specific topic contents of these literatures, and c) conduct a topic-level discrepancy analysis to identify the particular subjects of interest to practitioner interests at the *topic* level (rather than at the level of broad topic areas), we can offer more detailed specification of where future research efforts can be directed to help bridge the research-practice divide.

6.1. Sample

For this analysis, our aim was to compare the topic content of HRM scholarship with the interests of HR practitioners. As a proxy for practitioners' interests, we identified the Society for Human Resource Management's publication *HR Magazine* as a key outlet that caters to the interests of HR practitioners. According to a brand audit for *HR Magazine*, it is "the most widely read publication in the human resources sector, especially among senior-level professionals", with a total qualified circulation of 279,026, and with 108,783 executive and 108,375 manager-level subscribers (Society for Human Resource Management, 2015). Given its audience of HR practitioners, and clear incentive to cater to the interests of that audience, we suggest that *HR Magazine* is a reasonable proxy for HR practitioners' interests. This is in line with prior scholarship which has used *HR Magazine* as a proxy for the interests of 6114 *HR Magazine* articles available in the ProQuest database for the period 1992–2015 as of January 6, 2016. Peripheral content (e.g. book reviews, conference announcements, membership information) was excluded. The topic content of the practitioner literature was compared to the topic content of the 12,157 HRM research article sample described previously.

6.2. Comparative topic analysis

The topic content of *HR Magazine* was compared to the topic content of HRM scholarship using a four-step process. First, VOSviewer term identification (described previously) was used to identify noun phrases from the titles and abstracts of *HR Magazine* articles (van Eck & Waltman, 2011). Second, we calculated both a) the proportion of *HR Magazine* articles that referenced each term in their title/abstract, and b) the proportion of scholarly HRM articles that mentioned each term. Third, the degree of discrepancy in topic emphases between the two article sources was measured by subtracting the proportion of topic mentions in the academic HRM sample from the proportion of topic mentions in the *HR Magazine* sample. Fourth, and finally, two of the authors independently coded the terms were the most underemphasized in HRM scholarship relative to practitioner interest to identify any noun-phrases that were not meaningful for exclusion (e.g. "way", "addition"). Agreement between coders as to which terms should be excluded was high (Cohen's kappa = 0.90), and discrepancies were resolved via discussion and coders' examination of *HR Magazine* articles to determine whether the term in question was used in a meaningful way. From this process, we identified the top 100 terms emphasized to a much greater degree in *HR Magazine* than in academic HRM.

6.3. Limitations

In using *HR Magazine* as a proxy for practitioners' interests, our analysis has some limitations. First, *HR Magazine* likely offers an imperfect reflection of the interests of HR practitioners. As noted above, the audience for *HR Magazine* includes Society for Human Resource Management members, and particularly senior-level HR professionals (Society for Human Resource Management, 2015). Thus, this outlet likely caters to a particular subset of HR practitioners. While imperfect, this outlet has been singled out as the most widely read HR practitioner-oriented periodical by far (Rynes et al., 2007), and its contents indicate a strong orientation toward serving the needs of practitioners regarding the practicalities of HR in organizations, suggesting that it offers a reasonable proxy for HR practitioners' interests. Relatedly, as reflected in some of the discrepant terms reported below, the Society for Human Resource Management that publishes *HR Magazine* is based in the United States. As such, the topic content of this outlet may more strongly represent the interests of HR practitioners in the U.S.

6.4. Topic discrepancy results

In this section, we discuss seven key themes in the 100 most discrepant terms emphasized more strongly in the HR practitioner literature (see Table 7). These themes consist of sets of terms on a similar topic, and highlight opportunities for future HRM scholarship that more closely aligns with the interests of HR practitioners.

First, as can be seen in the top 100 most discrepant terms, key individual and collective actors involved in human resource management are emphasized to a much greater degree in this practitioner oriented outlet – e.g. "company", "employer", "HR professional", "HR executive", "HR department", "employee", and "worker". In particular, the practitioner literature places a much stronger emphasis on company executives – and especially on the relationships between HR departments and the company executives who tend to be key gatekeepers of organizational resources (e.g. "CEO", "board", "senior vice president", "officer", "executive", "director", and "president"). Indeed, there appears to be a keen interest among practitioners about the relationship between HR departments and company executives. Examples of *HR Magazine* articles evidencing this theme include: "What do HR executives want from CEOs?" (Leonard, 1998), "Selling work-life agendas to CEOs" (Budd, 1994), and "Top 10 things HR needs to know about CEOs" (Malloch, 1997). Such articles suggest a strong interest among HR practitioners in learning how to garner support, cooperation, or compliance from company executives.

The magnitude of these discrepancies suggest that greater alignment with the interests of practitioners would entail more consideration of the key actors and stakeholders involved in HR activities, and the relationship between HR departments and resource gatekeepers. In particular, one appealing avenue HRM scholars could pursue would be to examine the political upward, lateral, and downward influence techniques that allow HR managers to create new initiatives and shape the capabilities of the organization. Such articles appear to be highly relevant to practice, and yet comparatively rare in HRM scholarship (though see Galang & Ferris, 1997).

A second theme receiving comparatively greater emphasis in the practitioner literature pertains to the financial aspects of HR practice. Illustrative terms appearing to a comparatively greater degree in the practitioner literature include: "cost", "money", "expense", "bottom line", "dollar", "budget", "saving", and "productivity". In the main, the practitioner-oriented articles on this theme focus on how to financially justify different kinds of HR initiatives, policies, and services. Exemplars of such articles in *HR Magazine* include "Healthy workers improve the bottom line" (McShulskis, 1997), "Connecting the organizational pulse to the bottom line" (about employee surveys) (Garvey, 2004), "Figuring incentive plans' ROI" (Sammer, 2006), "Calculate the return on your investment for better budgeting" (O'Connell, 1995a), and "Share your worth: Talking numbers with the CEO" (Sheley, 1996).

If HRM scholars wanted to pursue this theme to align with the interests of practitioners, they could re-engage with classic works on utility analysis (Cascio, 2000; Schmidt & Hunter, 1998), which attempt to estimate the financial consequences of various HR policies and initiatives. The evidence from such scholarship could both guide and legitimate various HR initiatives. And yet, utility analysis has been relatively neglected by the academic HRM community. Given the rise of Evidence Based Management, and practitioner's comparatively strong interest in financial aspects of HR, perhaps it is time for a revival of utility analysis in HRM scholarship.

Top 100 terms emphasized to a greater degree in practitioner-oriented HRM compared to HRM scholarship^a.

Ferms	Practice article count	Academic article count	Emphasis discrepancy ^b	Emphasis rati
1) Employer	1419	647	17.89%	4.36
2) Company	1693	1531	15.10%	2.20
3) HR professional	842	244	11.76%	6.86
4) Employee	2139	2848	11.56%	1.49
5) Program	816	581	8.57%	2.79
j) Plan	462	187	6.02%	4.91
) Time	750	816	5.55%	1.83
) Cost	528	411	5.26%	2.55
) Benefit(s)	575	595	4.51%	1.92
0) Expert	331	120	4.43%	5.48
1) Business	503	477	4.30%	2.10
2) Law	274	89	3.75%	6.12
3) Job	631	833	3.47%	1.51
4) Worker	642	863	3.40%	1.48
5) Service	418	509	2.65%	1.63
6) Society for Human Resource Management	163	6	2.62%	54.02
7) Software	178	46	2.53%	7.69
8) Executive	270	233	2.50%	2.30
9) Tool	291	293	2.35%	1.97
0) Director	198	131	2.16%	3.01
1) Office	177	90	2.15%	3.91
2) Leader	279	293	2.15%	1.89
3) Workforce	337	424	2.02%	1.58
4) Money	147	49	2.00%	5.97
5) Technology	301	364	1.93%	1.64
6) Court	117	15	1.79%	15.51
7) Rule	164	114	1.74%	2.86
8) Consultant	155	97	1.74%	3.18
9) President	110	16	1.67%	13.67
0) Goal	285	365	1.66%	1.55
1) HR executive	116	36	1.60%	6.41
2) Risk	200	211	1.54%	1.88
) Productivity	246	303	1.53%	1.61
4) Candidate	177	167	1.52%	2.10
5) HR department	150	115	1.51%	2.59
6) Vendor	99	21	1.45%	9.37
7) Expense	111	45	1.45%	4.90
8) Responsibility	224	274	1.41%	1.62
9) Claim	146	122	1.38%	2.38
0) Board	119	72	1.35%	3.29
1) Workplace	352	537	1.34%	1.30
· ·	107			
2) Recruiting		50	1.34%	4.25
3) CEO	146	128	1.34%	2.27
4) Lawsuit	88	14	1.32%	12.50
5) Compliance	110	59	1.31%	3.71
6) Insurance	80	4	1.28%	39.77
7) Package	80	7	1.25%	22.72
3) Care	133	113	1.25%	2.34
9) Communication	243	332	1.24%	1.46
D) Equal Employment Opportunity Commission	76	3	1.22%	50.37
1) Internet	109	69	1.22%	3.14
2) Guideline	123	98	1.21%	2.50
3) Coverage	89	33	1.18%	5.36
4) Bottom line	85	27	1.17%	6.26
5) Trend	213	282	1.16%	1.50
6) Retirement	94	47	1.15%	3.98
7) Record	103	65	1.15%	3.15
3) Compensation	187	234	1.13%	1.59
Policy	421	700	1.13%	1.20
D) Morale	88	38	1.13%	4.60
1) Duty	84	31	1.12%	5.39
2) Health	136	135	1.12%	2.00
,				
3) Litigation	76	17	1.10%	8.88
4) Disability	94	53	1.10%	3.53
5) Congress	69	4	1.10%	34.30
6) [US] department of labor	70	6	1.10%	23.20
7) Americans with Disabilities Act	72	10	1.10%	14.31
8) Provider	101	68	1.09%	2.95
9) Hour	125	116	1.09%	2.14

Table 7 (continued)

Terms	Practice article count	Academic article count	Emphasis discrepancy ^b	Emphasis ratio ^c
70) Department	169	204	1.09%	1.64
71) Liability	76	20	1.08%	7.56
72) Recruiter	90	52	1.04%	3.44
73) Complaint	76	26	1.03%	5.81
74) Payment	67	9	1.02%	14.80
75) Web site	73	21	1.02%	6.91
76) Dollar	68	13	1.01%	10.40
77) Meeting	85	47	1.00%	3.60
78) Health plan	61	1	0.99%	121.29
79) Attorney	60	1	0.97%	119.30
80) Product	163	206	0.97%	1.57
81) Leave	62	6	0.96%	20.55
82) Hire	70	22	0.96%	6.32
83) Health care cost	59	1	0.96%	117.31
84) Officer	90	63	0.95%	2.84
85) Salary	99	83	0.94%	2.37
86) Mistake	59	4	0.93%	29.33
87) Budget	69	27	0.91%	5.08
88) Message	90	69	0.90%	2.59
89) Human resource information system	66	22	0.90%	5.96
90) User	96	82	0.90%	2.33
91) Administration	98	86	0.90%	2.27
92) American	79	49	0.89%	3.21
93) Fund	58	8	0.88%	14.42
94) School	100	94	0.86%	2.12
95) Computer	88	71	0.86%	2.46
96) Talent	153	201	0.85%	1.51
97) Senior vice president	53	3	0.84%	35.13
98) Professor	62	22	0.83%	5.60
99) Saving	59	18	0.82%	6.52
100) Benefit plan	50	1	0.81%	99.42

^a Practitioner-oriented article sample: n = 6114 articles. Academic HRM article sample: n = 12,157 articles.

^b The Emphasis Discrepancy is calculated by subtracting the proportion of scholarly HRM articles referencing a term from the proportion of practitioner-oriented articles referencing that term.

^c The Emphasis Ratio is calculated by dividing the proportion of practitioner-oriented articles referencing each term by the proportion of scholarly HRM articles referencing that term.

Third, information technology appears to be emphasized to a greater degree in practitioner-oriented content. Illustrative terms on this theme include: "human resource information system", "web site", "internet", "computer", "software", and "technology". Examples of *HR Magazine* articles on information technology include: "New technologies bring new tools, new rules" (O'Connell, 1995b), "Get the most out of HRIS training" (Jossi, 2001), "7 Reasons to LOVE Your ATS" (Applicant Tracking System) (Zielinski, 2015), and "From e-learning to mobile learning" (Roberts, 2012).

Although a small community of HRM scholars consider Human Resource Information Systems (Florkowski & Olivas-Luján, 2006; Gardner, Lepak, & Bartol, 2003; M. L. Lengnick-Hall & Moritz, 2003), it does not appear to be a major theme in HR scholarship. For instance, the term "human resource information system" (HRIS) is almost *six times* more prevalent in the practitioner sample than in the academic HRM sample. This may seem surprising, given that HRIS systems are both valuable sources of "big data" for scholars and are transforming the way that HR practitioners do their job and create value (M. L. Lengnick-Hall & Moritz, 2003). Potential opportunities for scholarship that speaks to practitioner interests in the HRIS domain could include: a) how practitioners combine algorithms and intuition to make decisions about hiring, promotion, training, pay, and dismissal, b) how HRIS systems shift decision making power in organizational strategy, e) linking the adoption of HRIS systems to employee wellbeing and financial performance, and f) how HRIS systems are changing the skills required to be successful in the HR profession.

Fourth, the term discrepancies identified also suggest comparatively greater practitioner interest in communication. When one digs into the articles associated with the discrepant terms "communication" and "message", two subthemes emerge. One stream of articles in *HR Magazine* deals with broadcasting messages: "Get the benefits message out" (Robb, 2009), "Corporate newsletters improve employee morale" (Sosnin, 1996), and "Use branding to drive home your message to employees" (Bates, 2001). An additional stream of practitioner-oriented articles consider HR's role in making sure that systems are in place to listen to employees, and to communicate messages tailored to them. Articles in this vein include, "Two-way communication fosters greater commitment" (Kane, 1996), and "Giving voice to employee concerns" (Hirschman, 2008).

As these articles indicate, HR practitioners play a key role in collecting, collating, and distributing information, as well as in setting up practices that ensure that information flows from employees to the upper echelons of the organization. However, HR's role in organizational communication does not appear to be a major theme in the academic literature. While there is a literature on "internal marketing" in Marketing journals (e.g. Dolphin, 2005; Foreman & Money, 1995), it is disconnected from theories and evidence relied upon by HRM scholars. We were able to locate very few research articles considering how HR

practitioners disseminate and gather employee information (for a rare exception, see V. D. Miller & Gordon, 2014). For example, an aforementioned article in *HR Magazine* claims that "Corporate newsletters improve employee morale" (Sosnin, 1996). We are not aware of any empirical research speaking to this very practical claim, nor were we able to locate any studies on the nature or effects of HR newsletters. Given that effectively communicating information upwards, downwards, and laterally is a key responsibility of HR professionals, more research into this competency may be warranted.

A fifth theme emphasized to a greater degree in the practitioner literature has to do with HR's role in formulating workplace rules. This makes sense given that HR's influence on other functions and units within the organization often operates through the guidelines, policies, and rules it develops. Examples of *HR Magazine* articles on this theme include: "Criminal background policy checkup" (Siniscalco, Connell, & Stathopoulos, 2012), "How to prepare an expatriate policy manual" (Overman, 1993), and "Setting fair pay policy" (Hestwood, 1992). As a sort of counterpoise, *HR Magazine* also includes articles that emphasize the dangers of excessively elaborate and stringent rules – e.g. "Rightsizing the rules" (Baldino, 1995), and "Foolish consistency" (Segal, 2004).

Although there are a few academic articles that discuss HR's role in making rules that reduce workplace uncertainty (Storey, Saridakis, Sen-Gupta, Edwards, & Blackburn, 2010; Townley, 1993), this topic does not appear to be a major theme in HRM scholarship. As such, research opportunities in this vein include developing a greater understanding of a) what factors prompt a guideline, policy, or rule to be developed by HR, b) factors affecting when the guidelines or policies developed by HR will actually be followed/enforced, c) when HR issues non-binding guidelines versus binding policies/rules, d) the benefits and costs of forming explicit rules governing employee behavior, and e) the path dependency of rules developed by HR (i.e. elaborating existing rules versus starting from scratch). In exploring these issues, HRM scholars might consider the existing work on bureaucratic rule-formation conducted by organizational theorists (e.g. Reynaud, 2005; Schulz, 1998; Sullivan, 2009).

A sixth theme emphasized to a greater degree in the practitioner literature has to do with the effects of legislation, and HR's role in compliance and preventing employee lawsuits. Highly discrepant terms relating to this theme include: "compliance", "liability", "litigation", "Americans with Disabilities Act", "disability", "US Department of Labor", "Congress", "lawsuit", "Equal Employment Opportunity Commission", "attorney", "complaint", "law", and "court". Examples of *HR Magazine* articles on this theme include: "Anatomy of an employment lawsuit" (Bland, 2001), "Doing mediation to avoid litigation" (Evans, 1994), "Alcoholic employees and the law" (Segal, 1993), "HR managers face legal aspects of workplace violence" (Quirk, 1993), "Unmasking illegal workers" (Krell, 2007), and "Mishandling terminations causes legal nightmares" (Lyncheski, 1995).

The articles above testify to the reality that navigating compliance with labor law is a large part of the HR function. However, the scholarly attention paid to this topic is much more limited. For example, a *six-fold increase* in HRM scholarship considering the law would be necessary for the term "law" to have the same degree of emphasis as in the practitioner literature. This discrepancy in emphasis is even larger for terms like "liability", "litigation", and "attorney". Examples of valuable research in this vein could include: a) how HR leaders balance being a "compliance cop" with being a "strategic partner", b) how HR practitioners navigate legal gray-zones, c) when legal compliance is used to justify HR policies, d) the extent to which laws affect the choice of HR practices around the globe, e) whether particular laws support or detract from responsible treatment of employees, f) the relationship between lawsuits and HR policy, and g) how employment law regimes affect organizational culture.

Finally, several key HR department activities emerged as emphasized to a greater degree in the practitioner literature. To start, although compensation is an active research topic in HRM scholarship, very discrepant terms like "compensation" and "salary" suggest that the amount of scholarly attention paid to these topics is not yet on par with practitioners' interest (Gupta & Shaw, 2014). Similarly, although there is an active community of scholars studying employee recruiting (for reviews, see Dineen, Soltis, & Zedeck, 2011; Farr & Tippins, 2013), discrepant terms like "candidate", "recruiting", "hire", "recruiter", and "tal-ent" suggest that practitioners may be even more focused on how to attract strong candidates than their scholarly counterparts. Finally, highly discrepant terms like "benefit [plan]", "package", "health", "health care cost", "health plan", "insurance", and "cov-erage" all reflect the major role HR practitioners play in the administration of (health) benefits. Yet, there is little scholarship on this subject. For example, while "health plan" is discussed in 61 practitioner articles, this topic is largely absent in HRM research.

In sum, as compared to HRM scholarship, this sample of practitioner-oriented articles devotes a greater proportion of attention to: 1) key actors (especially relationships with top executive resource gatekeepers), 2) financial concerns, 3) information technology, 4) communicating messages, 5) forming people policies, 6) compliance with the law, and 7) certain core HRM activities (i.e. compensation, recruitment, and benefits). We suggest that greater attention to the 100 highly discrepant topics identified in Table 7, and the seven topic themes discussed above, could help align HRM scholarship with the interests of practitioners.

7. Provocations

In reflecting on the analyses and reviews presented in this article, we think there are a number of interesting implications for HRM scholars to consider. In particular, this article has examined the intellectual content and structure of HRM scholarship to reveal "where we are" as a field. This article also considers "what's missing" in HRM scholarship from the world of practice. In this section, we aim to provide some inferences drawn from these analyses, and offer a number of "provocations" – challenges and growth opportunities for HRM's major literatures.

As can be seen in Figs. 5 and 6, while the *number* of Strategic HRM articles has grown over time, SHRM no longer dominates the intellectual space of HRM as it did in the 1990s. Rather, SHRM has been steadily declining as a proportion of the overall HRM literature – from approximately 35% of the articles produced in 1992 to 28% in 2014. Lengnick-Hall and colleagues observe that the contingency perspective has "shape[d] the agenda for SHRM research since the early 1980s" (M. L. Lengnick-Hall et al., 2009, p. 65). And yet, despite a great deal of enthusiasm around the idea that contingency theories would lead to predictive

and actionable SHRM frameworks (Martín-Alcázar et al., 2005), it is exceedingly difficult to measure and meaningfully interpret the interactions of a) diverse sets of HR practices, b) implemented in diverse ways, c) across diverse international, legal, industrial, ideological, and competitive contexts, d) among firms with diverse strategies, which are themselves implemented diversely. Add to this 1) the subjectivities and complexities involved in assessing firm performance (C. C. Miller, Washburn, & Glick, 2013), 2) the challenges to internal validity thrown up by the endogenous selection of HR practices (Gerhart, 2007), and 3) that paradigmatic consensus around measures, methods, and findings has remained elusive for the SHRM literature. In our view, Strategic HRM has become mired in its own complexity and has lost momentum in its search for managerial insights about how to create and capture organizational value. This loss of momentum has a direct analogue in the decline of Structural Contingency Theory in Organization Theory scholarship (Schoonhoven, 1981). As Starbuck notes in his description of Bonini's Paradox: "As a model grows more realistic, it also becomes just as difficult to understand as the real-world processes it represents" (Starbuck, 2004, p. 1275). We believe the best prospects for overcoming this challenge is the adoption of new configurational methods in SHRM that balance complexity, validity, and interpretability (Fiss, 2011; Fiss, Sharapov, & Crongvist, 2013).

For the Experiencing HRM literature, we see "thinking outside the black box" as a key challenge going forward. Historically, the mechanisms linking HR policies and organizational outcomes have been described as a "black box" (e.g. Ramsay, Scholarios, & Harley, 2000). While not all the way "clear", this metaphorical box might now be considered "translucent", as our results suggest that Experiencing HRM has been the fastest growing HRM literature over the past two decades (i.e. 12% compounding growth rate, see also Fig. 5). So, now, a key question for scholarship on Experiencing HRM becomes: Why do we care what these mechanisms are? Or, put more constructively, how can we use what we now know about the mechanisms linking HR practices with desired outcomes to generate or identify new HR practices worth studying? For example, given that role clarity has been shown to affect performance (Tubre & Collins, 2000), we could ask the question: are there HR practices that could be created or refined so as to provide greater role clarity? In this vein, Boston Consulting Group advises that HR managers should develop "role charters" for all employees that make explicit individual accountabilities, key collaborators, key required behaviors, key performance indicators, and decision rights (Kilmann, Shanahan, & Toma, 2011). This HR practice, while not yet widely spread, seems to have been reverse engineered to improve role clarity. By "working backwards" from the uncovered mechanisms of employee experiences, it may be possible to a) generate efficacious HR policies, b) identify existing HR practices that could be refined to more directly create the social, psychological, and knowledge-based conditions on which organizational performance depends, and c) infer which of the new policies being explored by HR practitioners are likely to be efficacious, and for what reasons. Indeed, our analysis of the HR practitioner literature suggests that organizations are experimenting with new policies and practices that are likely to operate through the mechanisms of employee experiences (e.g. open office structures, gamification of work, peer-recognition systems). Thus, we aim to provoke scholars working in the Experiencing HRM arena to "think outside the black box", and consider how they might build on their findings to develop prescriptions about HR policies.

In reviewing the analyses presented in this article, we suggest that there is also a considerable opportunity for Employment Relations scholarship to embrace investigating the effects of laws as a major area of inquiry. As our analysis of the topic content of practitioner-oriented HR reveals, the law is a major area of concern for HR practitioners. In a world where unions are on the decline, examining the effects of laws is a way for this literature to find new relevance, and identify new phenomena of study. However, this shift will require learning more about laws and political systems (Roehling, Posthuma, & Hickox, 2009). Indeed, developing the Employment Relations literature in this direction may be best accomplished through interdisciplinary collaboration with legal scholars.

The International HRM literature has also been growing rapidly (both in number of articles, and as a proportion of HRM scholarship overall, see Figs. 5 and 6), and is likely to continue to be a key growth area for the field (particularly as more international scholars contribute to HRM). We believe this literature would advance more quickly if it replaces its currently dominant "significant difference" paradigm with a "significant sameness" paradigm (Hubbard & Lindsay, 2013). The significance sameness paradigm develops "theory using inductive enumeration to identify and generalize empirical regularities over many data sets" (Hubbard & Lindsay, 2013, p. 1379). The goal of the significant sameness paradigm is to demonstrate "generalizations among variables, or results that are essentially repeatable over a wide range of conditions (e.g., different organizations, geographic areas, time periods, measurement instruments, researchers, etc.)" (Hubbard & Lindsay, 2013, p. 1378). Research that demonstrates which HR practices work across a variety of contexts is both scientifically and practically important. And yet, the review of the International HRM topic cluster indicates that a major focus of this literature is showing when a practice works *differently* (i.e. better or worse) in a particular place. However, we also need to know what works well across contexts (e.g. Does structured interviewing work in the Middle-East?). We submit that International HRM scholars, as a community, should push back against the idea that a paper only has value if it shows that a general rule does <u>not</u> hold (or holds differently) in a particular international context (Byington & Felps, 2016). If well done, a study that shows that an HRM practice also works well in a new location, in our opinion, is a significant contribution that should not be unpublishable or relegated to a low status journal.

Our final provocation considers the topic cluster Assessing People. We believe that scholarship in this domain could advance by more fully incorporating philosophical paradigms beyond positivism (Alvesson & Deetz, 2006). In particular, our review indicates that most scholarship in this domain assumes that assessments of people simply reflect underlying realities. In contrast, taking seriously critical or interpretivist philosophical paradigms would allow consideration of how assessments of people a) allocate power to certain actors, and b) help people make sense of complex realities. There is some work in this vein, but not much (e.g. Bolander & Sandberg, 2013; McGivern & Ferlie, 2007; Newton & Findlay, 1996; Shields & Grant, 2010; Townley, 1993). Take, for example, the construct of job performance. Most of the research related to this cluster assumes that job performance can be assessed by supervisor's ratings of job performance. However, this is rendered problematic by two factors, 1) managers have social and political motives for their assessments that go beyond accurately assessing reality, and 2) what counts as good job performance depends on what one values. First, managers may give different performance evaluations depending on what they want to happen as a consequence of those evaluations – e.g. making the case to fire a person, giving a person a raise to reward loyalty, or keeping a strong performer from being promoted out of one's unit (Longenecker, Sims, & Gioia, 1987). Second, and more broadly, the factors that organizations assess reflect what is valued by those who have power, rather than what has value in some ultimate or objective sense (Fleming & Spicer, 2014). For example, assessments can include or exclude factors related to ethics, serving customers, helping colleagues, or being proactive and innovative. Which elements are included in assessments is a strong signal to employees about what has value to those who have the power to allocate opportunities and rewards. Thus, assessments of people are "performative" – i.e. they simultaneously describe and change the social reality (Byington & Felps, 2010). If scholars in this domain were to increase their sensitivity to the political and performative elements of assessing people, it could open up a range of interesting questions, such as: a) how are decisions made about which assessments organizations use, b) what are the motives for using different kinds of assessment approaches, c) who gains and loses power when (particular) assessment practices change, d) why are assessments with little predictive power or scientific legitimacy (e.g. Myers-Briggs measure of personality) so popular in practice (Garrety, 2007), e) which stakeholders' interests are reflected in the assessments used (Greenwood, 2012), f) what happens when what is easy to measure accurately is different from underlying beliefs about what has real value? These interesting questions are largely sidelined by the dominant paradigmatic assumption that assessments of people merely reflect underlying realities. Questioning that assumption could open new realms of inquiry.

8. Conclusion

As our analysis reveals, the field of HRM has experienced considerable growth in the number of articles produced each year. However, the ability to build on the insights being produced is contingent on a) whether we can detect those opportunities within the vast sea of HRM scholarship, as well as b) our ability to contextualize those insights into a "big picture" understanding of where those ideas fit in the HRM field. In presenting this analysis of 12,157 HRM articles, and reviewing the overall intellectual structure of the HRM field and five major topic areas within it, we aim to provide scholars with a detailed and contextualized view of what the various literatures within HRM have been talking about. Moreover, through the downloadable HRM Map, readers have the opportunity to explore in detail how much scholarship has been devoted to 1702 topics in HRM scholarship, and which topics are closely (and not so closely) integrated into those scholarly conversations. We believe that this synthetic overview of HRM scholarship, when combined with the diverse insights and perspectives of scholars working in the HRM field, can yield ground-breaking, integrative new directions for HRM scholarship going forward.

Among the possible future directions for the HRM field, we see greater alignment with the interests of HR practitioners as a key aim. To make that aim an actionable reality, we have endeavored to considerably enrich the discussion of the HRM research-practice gap by identifying 100 specific topics where the field's deviations from the interests of practitioners appear to be most stark. In reviewing the discrepancies between HRM scholarship and practitioner interests, we were struck by not only the numerous opportunities for HRM scholarship to meaningfully contribute to that conversation, but also the opportunities to considerably enrich HRM scholarship by reflecting the diverse and complex realities of HR practice in the 21st century being discussed by practitioners.

Finally, we have provided a number of "provocations" about the state of the field – i.e. key challenges and opportunities we envision for HRM's major literatures going forward. In presenting these observations, we aim to encourage scholarly efforts that embrace what we see as key "growth" opportunities given these literatures' orientations, pervasive assumptions, and relationships to practice.

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